A MARKET FORECAST AND ANALYSIS OF PROFESSIONAL SERVICES AND SYSTEMS OPERATIONS SECTORS

INPUT

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INPUT OFFICES

North America

San Francisco
1280 Villa Street
Mountain View, CA 94041-1194
Tel. (415) 961-3300 Fax (415) 961-3966

New York
Atrium at Glenpointe
400 Frank W. Burr Blvd.
Teaneck, NJ 07666
Tel. (201) 801-0050 Fax (201) 801-0441

Washington, D.C. - INPUT, INC.
1953 Gallows Road, Suite 560
Vienna, VA 22182
Tel. (703) 847-6870 Fax (703) 847-6872

International

London - INPUT LTD.
Piccadilly House
33/37 Regent Street
London SW1Y 4NF, England
Tel. (071) 493-9335 Fax (071) 629-0179

Paris - INPUT SARL
24, avenue du Recteur Poincaré
75016 Paris, France
Tel. (1) 46 47 65 65 Fax (1) 46 47 69 50

Frankfurt - INPUT LTD.
Sudetenstrasse 9
W-6306 Langgöns-Niederkleen, Germany
Tel. 0 6447-7229 Fax 0 6447-7327

Tokyo - INPUT KK
Saida Building, 4-6
Kanda Sakuma-cho, Chiyoda-ku
Tokyo 101, Japan
Tel. (03) 3864-0531 Fax (03) 3864-4114

M&S 459/01 5/92

JUNE 1992

A MARKET FORECAST AND ANALYSIS OF PROFESSIONAL SERVICES AND SYSTEMS OPERATIONS SECTORS

For

International Business Machines
White Plains, New York

June 24, 1992

NOT LOANABLE

INPUT®

1280 Villa Street, Mountain View, California 94041-1194 (415) 961-3300

Published by
INPUT
1280 Villa Street
Mountain View, CA 94041-1194
U.S.A.

A Market Forecast and Analysis of Professional Services and Systems Operations Sectors

Printed in the United States of America.

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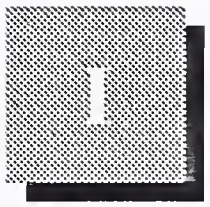


Introduction

A Objectives

IBM has been a long-time subscriber to INPUT's Market Analysis Program, which sizes, analyzes, and forecasts the U.S. information services market. The Market Analysis Program analyzes the market in terms of delivery mode (e.g., professional services, software products, processing, etc.) as well as by market (e.g., vertical market).

In addition to this type of information delivery, IBM needs to bring together in one place all INPUT's information related to the professional services, systems integration, and systems operation market. For this purpose IBM has requested that INPUT regroup and reanalyze previously-assembled data and analysis to focus specifically on these service markets. The reasons for doing so include:

- To produce a finer granularity in market sizing and forecasting, especially for professional service delivery submodes by vertical market and leading vendors and associated market share by vertical market.

- To identify issues that are driving specific segments of professional services (by submode and/or vertical industries).

- To apply IBM vertical industry segmentation/definitions, where they differ from INPUT's.

- To apply IBM's economic assumptions.

The reanalysis of information contained in this report provides IBM a single-point information source that unites market sizing, forecasting, competitive analysis, and sector trend analyses.

B
Scope

Professional services (including the professional services component of systems integration) and systems operations are segmented for the purposes of this report into 26 industry groups, as described in the IBM-supplied document "*Industry Classification Codes.*" Within each industry, the professional services data is allocated into professional services "submodes":

- Consulting
- Software Development
- Education and Training
- Systems Operations

Note: The professional service component of systems integration is allocated among the four submodes above.

INPUT's Systems Integration forecasts include the Information Technology portions of the Federal Government budgets for Defense and Civil agencies. The application of most "off-the-shelf" technology is included. Milspec Systems and commercial systems that are embedded in weapons platforms are not included in INPUT's market forecasts. In addition, INPUT does not attempt to acquire and forecast the information technology and services used in classified systems.

Systems operations was redefined by INPUT in late 1991 into the sub-delivery modes of platform based and applications based operations. These definitions better described the type of service that was being performed as opposed to the location of the services definition that had been used in the past. Platform systems operations is defined as the day to day operation of pre-existing application software programs. Applications based systems operations includes the maintenance and updating of the applications being run by the vendor.

The following information is supplied for professional services, systems integration and systems operations by industry:

- Market size

- Vendors active in a market and their market share. Note: Generally, specific market share information is shown for five vendors or for at least half the applicable market (whichever is larger). INPUT has strived in the last two years to increase the market share report for IBM.

Summary form information is supplied by the sub-delivery modes of professional services/systems integration and systems operations by vendor. Information is also provided in summary form on key applications in each industry.

A discussion of professional services-related issues in each industry analysis is included. These issues include:

- Trends, technology impacts, etc.
- Reasons for a vertical market being significantly above or below average.
- Reasons for vendor success, vendor strategies, etc.
- Generally, industry market trends are not discussed except for those that directly affect professional services or systems operations.

Where systems operations issues are different from professional services issues, these are distinguished and discussed.

In cases where there have been changes in market sizing/forecasts from prior years, this is noted and analyzed. (Generally, if the change is significant in terms of size or direction, this is discussed in the main text; small, technical changes will be explained in a "Reconciliation" section of the Executive Overview.)

The basic source for information has been INPUT's 1990/1991 Market Analysis Program reports, data bases, and underlying analyses. Analysis and secondary research has been performed as required (for example, to identify and spread professional services revenues of particular vendors).

Vendor data given is for 1991 and is calendarized as necessary. In some cases, vendor data, especially for industry allocations, is preliminary and/or estimated.

C
Methodology

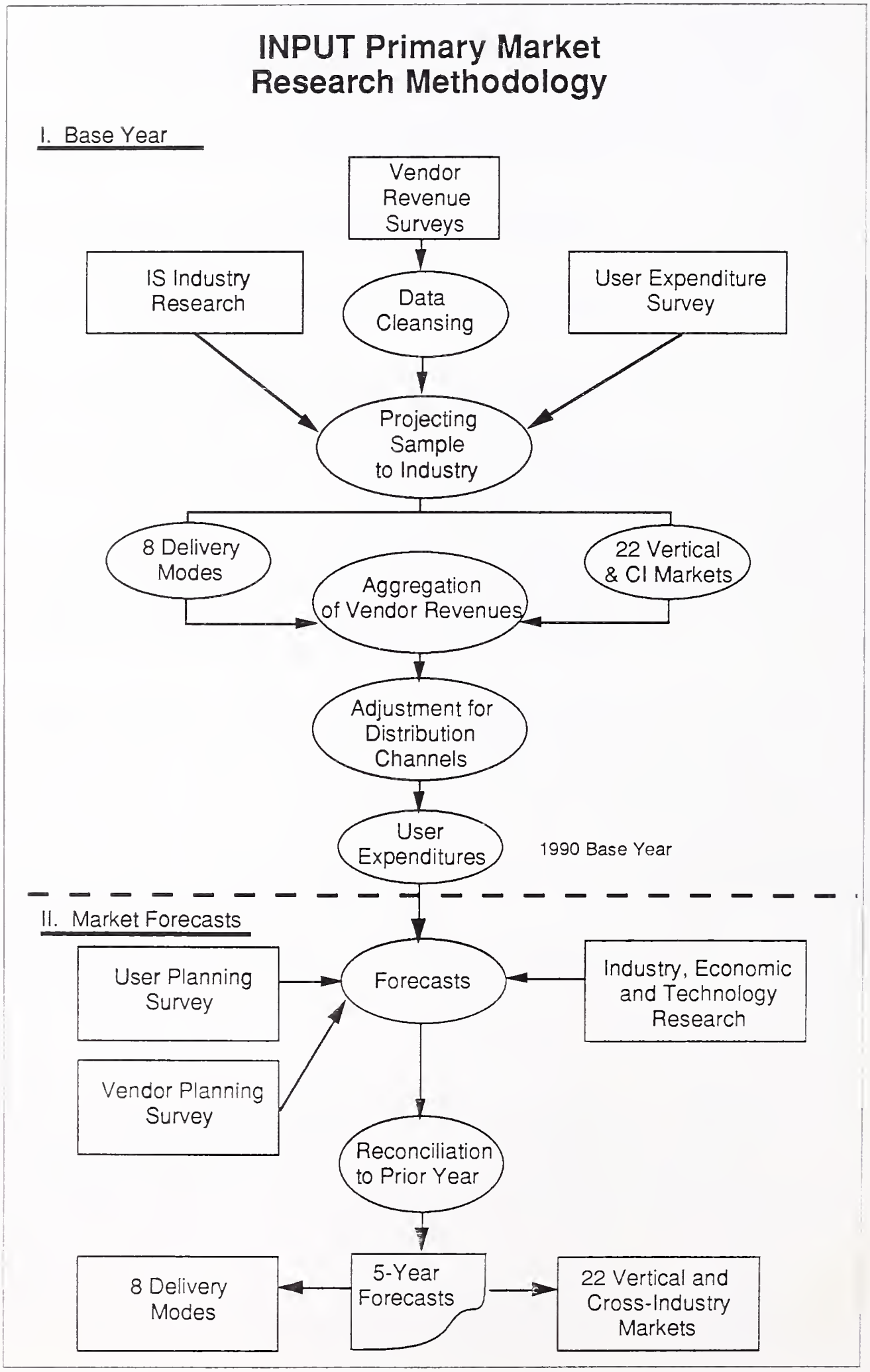
This report is a combination of INPUT's IS forecasts, quantitative analysis, factual information, and industry knowledge.

1. Introduction

During 1990 and 1991 INPUT conducted in-depth interviews with 600 information services vendors, including nearly all of the largest 250 firms, with revenues of $20 million or more. These surveys and estimates provided the initial vendor revenue estimates for 1991. Total base year 1991 actual or forecast revenues are then summed into eight delivery modes and 15 vertical and seven cross-industry segments for closer analysis and five-year projections. Only U.S revenues and professional services non-captive revenues were examined for this forecast. Conversion factors were applied to convert the vendor revenues to user expenditures. The conversion factors used for the information in this report can be found in

the report *U.S. Professional Services Markets, 1991-1996*. Exhibit I-1 depicts the INPUT research methodology used in preparing the INPUT IS forecasts.

EXHIBIT I-1



2. Quantitivative Analysis

INPUT created 15 worksheets, one for each major industry sector as defined by INPUT. Each worksheet contained the following information:

- A list of the two-digit Standard Industrial Classification (SIC) codes that comprise the industry sector
- For each INPUT-defined sector, a crosswalk definition of the IBM-defined industry sector or sectors
- An algorithm was developed for moving the INPUT-defined sector data to the appropriate IBM-defined sector or sectors.
- Where sectors do not match, an allocation factor was derived from SIC data from the U.S. Department of Commerce and INPUT's judgment of professional services market potential.

A computer program was applied to INPUT's data base to:

- Delete the INPUT inflation factors from the original INPUT professional services market forecast.
- Algorithms executed to segment the INPUT data and recast it in the IBM format.
- Apply the IBM-defined inflation factors.
- Create the new forecast data in the format defined by IBM for each of the 26 industry sectors.
- Create the new forecast data for each of the four professional services delivery modes as well as for system operations.

All data was reviewed for reasonableness.

D
Factual Information

INPUT assembled the following from its data bases and vendor files:

- Vendors in a particular industry sector, with sizing as reported in INPUT's data bases.
- "Up and coming" vendors.

- Contract information as identified in INPUT's "Corporate Project Data Base", and data collected from vendors for INPUT's Vendor Analysis Program and Systems Integration Program.

INPUT forecasts are presented in current dollars. In developing the five-year forecasts, INPUT has incorporated current economic assumptions regarding the U.S. economy as a whole. Exhibit I-2 presents the inflation assumptions from the 1990-1995 market forecast used in this report.

EXHIBIT I-2

Inflation Growth Rate Assumptions

	Percent						
	1991	1992	1993	1994	1995	1996	1997
INPUT	3.9	3.6	3.9	3.9	3.8	3.7	3.7
IBM	3.6	3.0	3.0	3.4	3.7	4.0	3.8

E

Industry Knowledge

Knowledge of the information services industry, professional services, and individual industry sectors was added throughout the project. Tasks where this knowledge will be applied include:

- Allocation between INPUT-defined and IBM-defined industry sectors.
- Review of market size crosswalks.
- Allocation of particular vendor revenues across industries.
- Allocation of particular vendor revenues across submodes.
- Vendor strategies and positioning.
- Identification of applications by industry and submode.
- Identification of, and rationale for, "up and coming" vendors.
- Classification of contracts between "professional services," "systems integration," and "systems operations."
- Issue and trend identification.

F
INPUT Definitions

1. Professional Services

This category includes four submodes: consulting, education and training, software development, and applications management. Exhibit I-3 provides additional detail.

- *Consulting:* Services include management consulting (related to information systems), information systems re-engineering, information systems consulting, feasibility analysis and cost-effectiveness studies, and project management assistance. Services may be related to any aspect of the information system, including equipment, software, networks and systems operations.

- *Education and Training:* Services that provide training and education or the development of training materials related to information systems and services for the information systems professional and the user, including computer-aided instruction, computer-based education, and vendor instruction of user personnel in operations, design, programming, and documentation. Education and training provided by school systems are not included. General education and training products are included as a cross-industry market sector.

- *Software Development:* Services include user requirements definition, systems design, contract programming, documentation, and implementation of software performed on a custom basis. Conversion and maintenance services are also included.

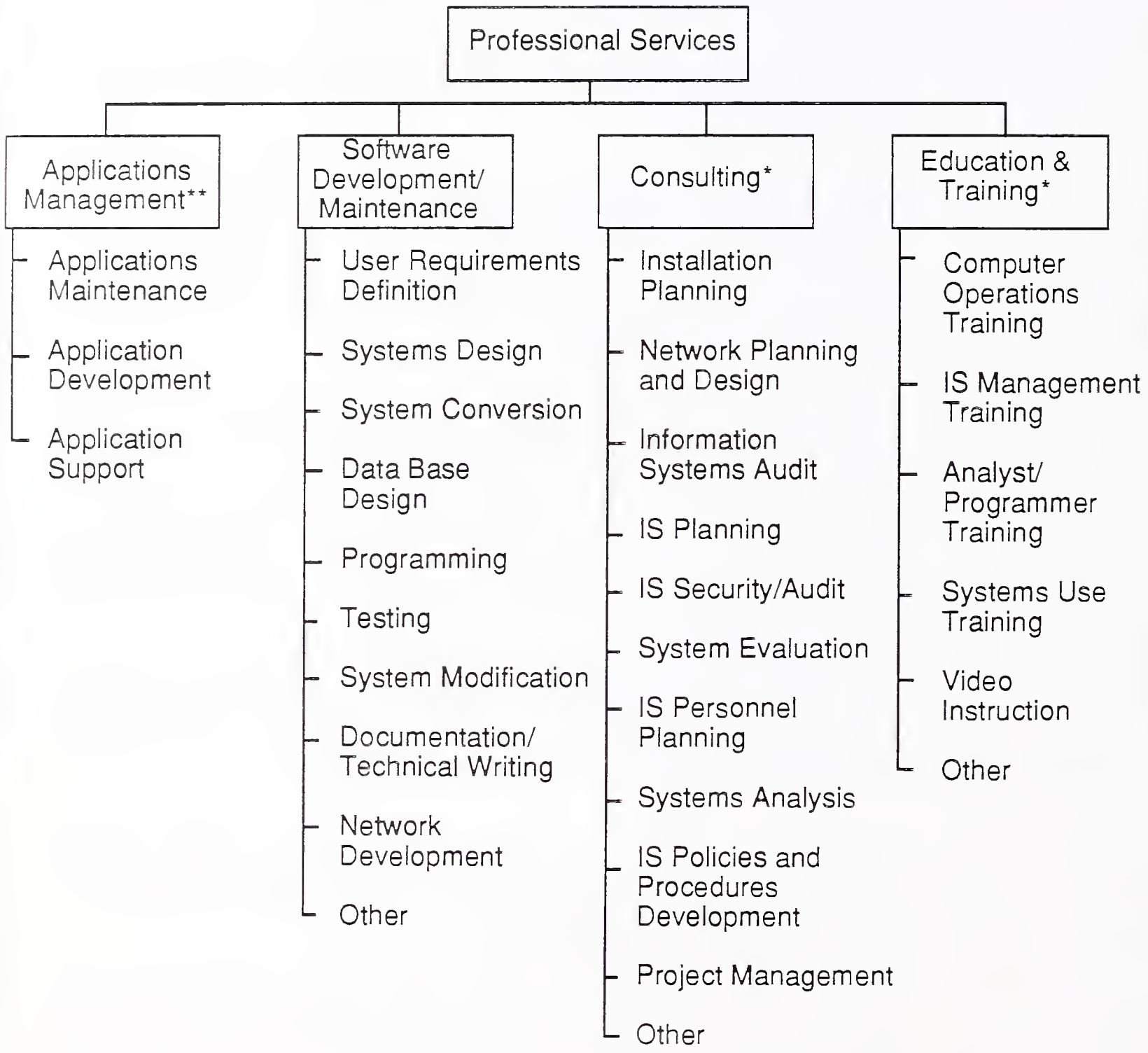
- *Applications Management*: The vendor has full responsibility for maintaining and upgrading some or all of the application systems that a client uses to support business operations and may develop and implement new application systems for the client.

  An applications management contract differs from traditional software development in the form of the client/vendor relationship. Under traditional software development services the relationship is project based. Under applications management it is time and function based.

  These services may be provided in combination or separately from platform systems operations.

EXHIBIT I-3

Professional Services Market Structure



*Related to computer systems, topics, or issues

**Vendor assumes full responsibility on contracted longer term basis

2. Systems Integration (SI)

Systems integration is a vendor service that provides a complete solution to an information system, networking or automation development requirement through the custom selection and implementation of a variety of information system products and services. A systems integrator is responsible for the overall management of a systems integration contract and is the single point of contact and responsibility to the buyer for the delivery of the specified system function, on schedule and at the contracted price. (Refer to Exhibit I-4.)

The components of a systems integration project are the following:

- *Equipment* - information processing and communications equipment required to build the systems solution. This component may include custom as well as off-the-shelf equipment to meet the unique needs of the project. The systems integration equipment category excludes turnkey systems by definition.

- *Software products* - prepackaged applications and systems software products.

- *Professional services* - the value-added component that adapts the equipment and develops, assembles, or modifies the software and hardware to meet the system's requirements. It includes all of the professional services activities required to develop, implement, and if included in the contract, operate an information system, including consulting, program/project management, design and integration, software development, education and training, documentation, and systems operations and maintenance.

- *Other services* - most systems integration contracts include other services and product expenditures that are not classified elsewhere. This category includes miscellaneous items such as engineering services, automation equipment, computer supplies, business support services and supplies, and other items required for a smooth development effort.

EXHIBIT I-4

Products/Services in Systems Integration Projects

Equipment

- Information systems
- Communications

Software Products

- Systems software
- Applications software

Professional Services

- Consulting
  - Feasibility and trade-off studies
  - Selection of equipment, network and software
- Program/project management
- Design/integration
  - Systems design
  - Installation of equipment, network, and software
  - Demonstration and testing
- Software development
  - Modification of software packages
  - Modification of existing software
  - Custom development of software
- Education/training and documentation
- Systems operations/maintenance

Other Miscellaneous Products/Services

- Site preparation
- Data processing supplies
- Processing/network services
- Data/voice communication services

3. Systems Operations

Systems operations as a delivery mode was introduced in the 1990 Market Analysis and Systems Operations programs. Previously called Facilities Management, this delivery mode was created by taking the Systems Operations submode out of both Processing Services and Professional Services. For 1992 the submodes have been defined as follows.

Systems operations involves the operation and management of all or a significant part of the client's information systems functions under a long-term contract. These services can be provided in either of two distinct submodes where the difference is whether the support of applications, as well as data center operations, is included.

- *Platform systems operations* - The vendor manages and operates the computer systems, to perform the client's business functions, without taking responsibility for the client's application systems.

- *Applications systems operations* - The vendor manages and operates the computer systems to perform the client's business functions, and is also responsible for maintaining, or developing and maintaining, the client's application systems.

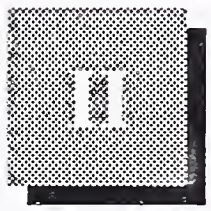
- *Network Management* - The vendor assumes responsibility for operating and managing the client's data communications systems. This may also include the voice communications of the client. A network management outsourcing contract may include only the management services or the full costs of the communications services and equipment plus the management services.

- *Desktop Services* - The vendor assumes responsibility for the deployment, maintenance, and connectivity among the personal computers and/or workstations in the client organization. The services may also include performing the help-desk function. Equipment as well as services can be part of a desktop services outsourcing contract.

  Note: This type of client service can also be provided through traditional professional services where the contractual criteria of outsourcing are not present.

Systems operations vendors now provide a wide variety of services in support of existing information systems. The vendor can plan, control, provide, operate, maintain and manage any or all components of the client's information systems environment (equipment, networks, applications systems), either at the client's site or the vendor's site.

Note: In the federal government market, systems operation services are also defined by equipment ownership with the terms "COCO" (Contractor-Owned, Contractor-Operated), and "GOCO" (Government-Owned, Contractor-Operated).



Professional Services Market Overview

A
Industry Forecast, 1992-1997

The INPUT forecasts for the professional services, systems operations (processing), and systems integration markets are shown in Table 1 of the Appendix. There are many factors driving these forecasts, including the following.

Professional Services

Increasing use of information services in business operations requires new and/or modified applications. This demand will not be met with current internal IS personnel in most firms since IS staffs have been cut back and there is more reliance on external suppliers on a temporary basis; there is a backlog of work and the complexity of new or changing applications requires education of and research by current IS and user personnel.

Mergers, acquisitions and reorganizations among user organizations also lead to demand for service vendors. Linking disparate mission-critical systems and applications is required to solve major problems. This heightens user interest in professional services capabilities.

The lack of personnel with higher levels of IS skills at user sites creates a demand for professional services vendors who have the resources to recruit and train personnel with specialized IS capabilities.

New technologies have driven, and continue to drive the demand for professional services. Users cannot implement and stabilize technologies rapidly enough to take advantage of new capabilities.

Professional services began to feel an impact when worsening economic conditions overtook sectors of business, particularly retail areas, in early 1990. Weakness spread to other business sectors including transportation and manufacturing. The impact on professional services lessened during 1991 and should decrease further in 1992 as recovery from the recession takes place.

Systems Operations

The major factors driving the SO market include the possibility of reducing and controlling corporate expenditures for information technology by letting a vendor with more experience in system planning who can afford to maintain personnel with specialized skills take responsibility for providing adequate resources to accomplish required operational loads. This reduces the risks of utilizing information technology and frees internal resources and investment capital for strategic activities.

Systems Integration

Competitive pressures and shortages of high level personnel are forcing organizations to seek the aid of vendors experienced in their industries and in needed applications to examine their core business and identify business solutions that can help to differentiate products and services in the market. In many cases, the application of technology can make the difference in offering services faster or reducing product development time and cost.

A very important factor driving the use of systems integration is that most IS expenditures are no longer being controlled exclusively by the IS organizations. The users are becoming the buyers of IS solutions and control the budgets for these projects. Systems integrators with good track records provide an attractive alternative to internal IS organizations to develop systems that will meet the user's requirements.

B

Service Submode Forecast

The sub-mode forecasts are presented as subsets of the industry forecasts in Appendix A. Professional services, by INPUT's traditional definition, includes software development, consulting, education and training. Systems operations, traditionally referred to as facilities management and processing services, now referred to as platform or application processing, is also included.

Systems integration includes hardware, professional services, and other components. This analysis focuses on the professional services portion of SI, excluding the revenue from computer and communications hardware or other services. This professional services portion is presented as the components of software development, design/integration, project management/consulting, education & training, operations/maintenance, software products, and other services.

C
Key Applications

Key applications for each industry are listed in Exhibit II-1, first by "generic" application category and then, as appropriate, by specific industry system. In general, the exhibit indicates that the applications to which professional services are being applied are "diagonal" in nature; that is, applications with similar functionality are required in multiple industries. To be sure, each industry has specific requirements for the application, creating the diagonal notion.

D
Competition

1. Major Vendors In Professional Services

Exhibit II-2 presents the major professional services vendors and their respective market share by sub-mode of service. While literally thousands of professional firms exist, the market is dominated by about 35 vendors in the $100 million club.

2. Systems Operations Vendors

Exhibit II-2 presents the systems operations vendors and their respective market share.

3. Major Vendors by Industry

An analysis of the major vendors in each vertical market is presented in Exhibit II-3. Approximately 120 vendors dominate the professional services/systems integration and systems operation marketplace, accounting for 50% or more of the market.

E
Forecast Reconciliation

1. Reconciliation of the Professional Services Industry

Data Base Reconciliation, 1990-1991

The 1990 report forecast a 1990 professional services industry totalling $16764 million. Actual 1990 professional services industry size was $16761 million, a difference of less than 1%.

The five year growth rate changed from 12% to 8%, reflecting the following trends:

- Significantly slower economic growth in the forecast period.
- A shift in consulting and software development toward systems integration-based services.
- Greater use of system software products/software engineering and application software products which make use of software engineering for customization.

2. Reconciliation of Systems Integration Market

The commercial and federal systems integration markets saw a variety of forces affecting the rates of growth since the INPUT forecast for 1990. The INPUT forecast for the SI market in 1990 was $3913 million (excluding equipment). The actual total was $4062 million, an increase of almost 4%, reflecting pressure to upgrade application systems.

3. Reconciliation of Systems Operations Market

The original systems operations forecast for 1990 was $7262 million; the actual 1990 level was $8300 million, which was an increase of 14%. This was due to the increasing pressure to reduce the impact of information technology costs in current periods.

Other reasons for continued growth in systems operations overall include the shift away from ad hoc processing services toward more integrated processing of a firm's suite of applications. This shift requires the kind of long-term commitment which is the basis of the systems operations business.

EXHIBIT II-1: KEY APPLICATIONS BY INDUSTRY

Application Category	Industry Application	MANUF.	AUTO.	AERO.	ELECT. MACH.	CONSTR.
Accounting & Finance	Accounting	X	X	X	X	X
	MRP & Related	X	X	X	X	
Billing/Processing	Billing					
	Card Processing					
	Claims Processing					
	Clearance & Settlement					
	Collection, Assessment					
	Collection/Analysis					
	Patient Management					
	Payment Processing					
	Reservation Systems					
Customer Service	Customer Service	X	X		X	X
Data Collections	Automatic Meter Reading					
	Order Entry	X	X	X	X	X
	POS & Related					
Human Resources	Benefits Admin.	X	X	X	X	X
	Ed. Process Monitoring					
	Employee Training					
	Personnel Mngmt.					
Marketing	Marketing					
	Merchandising					
Office Info Systems	Agent Systems					
	Decision Support					
	Desktop Publishing					
	Integrated Publishing					
	Integrated Communications					
	Integrated Hospital Sys.					
	Networks	X	X	X	X	X
	Office Info Systems					
Operation Automation	Application Development					
	Automated Warehouse	X	X	X	X	
	CAD/CAE	X	X	X	X	
	Consumer Loan					
	Correspondent Banking					
	Integrated Logistics					
	Inventory Management	X	X	X	X	X
	Laboratory Automation					
	List Management					
	Operations	X	X		X	X
	Portfolio Management					
	Process Control					
	Public Safety & CAD					
	Securities Transfer					
	Trading & Funds Systems					
Tracking & Analysis	Audience Analysis					
	Case Load Management					
	Court & Criminal Justice					
	Geographic Info Systems					
	Maintenance Scheduling					
	Linear Programming			X		
	Planning			X		
	Plant Maintenance	X	X	X	X	
	Project Management		X	X		
	Records Management					
	Risk Analysis					
	Work Schedule. Management					

EXHIBIT II-1: KEY APPLICATIONS BY INDUSTRY

Application Category	Industry Application	PROCESS	CONSUMER	CHEM/PHARM	PETR	R/G/M
Accounting & Finance	Accounting	X	X	X	X	X
	MRP & Related	X		X		X
Billing/Processing	Billing					
	Card Processing				X	X
	Claims Processing					
	Clearance & Settlement					
	Collection, Assessment					
	Collection/Analysis		X	X		
	Patient Management					
	Payment Processing					
	Reservation Systems					
Customer Service	Customer Service	X	X	X		
Data Collections	Automatic Meter Reading					
	Order Entry	X	X	X	X	X
	POS & Related					
Human Resources	Benefits Admin.	X	X	X	X	X
	Ed. Process Monitoring					
	Employee Training					
	Personnel Mngmt.					
Marketing	Marketing		X			
	Merchandising					
Office Info Systems	Agent Systems					
	Decision Support		X			
	Desktop Publishing					
	Integrated Publishing					
	Integrated Communications					
	Integrated Hospital Sys.					
	Networks		X			
	Office Info Systems					
Operation Automation	Application Development					
	Automated Warehouse		X	X		
	CAD/CAE					
	Consumer Loan					
	Correspondent Banking					
	Integrated Logistics					
	Inventory Management	X	X	X	X	X
	Laboratory Automation			X		
	List Management		X			
	Operations	X				
	Portfolio Management					
	Process Control	X		X	X	X
	Public Safety & CAD					
	Securities Transfer					
	Trading & Funds Systems					
Tracking & Analysis	Audience Analysis		X			
	Case Load Management					
	Court & Criminal Justice					
	Geographic Info Systems					
	Maintenance Scheduling	X		X	X	X
	Linear Programming		X	X	X	
	Planning					
	Plant Maintenance	X	X			
	Project Management					
	Records Management					
	Risk Analysis					
	Work Schedule, Management					

EXHIBIT II-1: KEY APPLICATIONS BY INDUSTRY

Application Category	Industry Application	COMMUN.	COMP.	CONSULT	HEALTH	HIGHER ED
Accounting & Finance	Accounting	X	X	X	X	X
	MRP & Related					
Billing/Processing	Billing	X			X	
	Card Processing	X				
	Claims Processing					
	Clearance & Settlement					
	Collection, Assessment					
	Collection/Analysis	X			X	
	Patient Management				X	
	Payment Processing					
	Reservation Systems					
Customer Service	Customer Service	X				
Data Collections	Automatic Meter Reading					
	Order Entry					
	POS & Related					
Human Resources	Benefits Admin.	X				X
	Ed. Process Monitoring					
	Employee Training	X	X	X		
	Personnel Mngmt.					X
Marketing	Marketing		X			
	Merchandising					
Office Info Systems	Agent Systems					
	Decision Support			X		
	Desktop Publishing			X		
	Integrated Publishing					
	Integrated Communications					X
	Integrated Hospital Sys.				X	
	Networks	X				X
	Office Info Systems			X		
Operation Automation	Application Development		X			
	Automated Warehouse					
	CAD/CAE					
	Consumer Loan					
	Correspondent Banking					
	Integrated Logistics					
	Inventory Management					
	Laboratory Automation				X	
	List Management					
	Operations					
	Portfolio Management					
	Process Control					
	Public Safety & CAD					
	Securities Transfer					
	Trading & Funds Systems					
Tracking & Analysis	Audience Analysis					
	Case Load Management					
	Court & Criminal Justice					
	Geographic Info Systems					
	Maintenance Scheduling	X				
	Linear Programming					
	Planning	X				
	Plant Maintenance					
	Project Management			X		
	Records Management					
	Risk Analysis					
	Work Schedule Management					

EXHIBIT II-1: KEY APPLICATIONS BY INDUSTRY

Application Category	Industry Application	MEDIA	SCHOOLS	S & L GOV.	TRANSP.	UTIL.
Accounting & Finance	Accounting	X	X	X	X	X
	MRP & Related					
Billing/Processing	Billing	X			X	X
	Card Processing					
	Claims Processing					
	Clearance & Settlement					
	Collection, Assessment			X		
	Collection/Analysis					
	Patient Management					
	Payment Processing					
	Reservation Systems				X	
Customer Service	Customer Service					X
Data Collections	Automatic Meter Reading					X
	Order Entry					
	POS & Related					
Human Resources	Benefits Admin.				X	
	Ed. Process Monitoring		X			
	Employee Training					
	Personnel Mngmt.					
Marketing	Marketing	X			X	X
	Merchandising					
Office Info Systems	Agent Systems					
	Decision Support					
	Desktop Publishing	X	X			
	Integrated Publishing	X				
	Integrated Communications					
	Integrated Hospital Sys.					
	Networks			X		
	Office Info Systems		X			
Operation Automation	Application Development					
	Automated Warehouse					
	CAD/CAE					X
	Consumer Loan					
	Correspondent Banking					
	Integrated Logistics					
	Inventory Management					
	Laboratory Automation					
	List Management	X				
	Operations					
	Portfolio Management					
	Process Control					
	Public Safety & CAD			X		
	Securities Transfer					
	Trading & Funds Systems					
Tracking & Analysis	Audience Analysis	X				
	Case Load Management			X		
	Court & Criminal Justice			X		
	Geographic Info Systems			X		X
	Maintenance Scheduling					
	Linear Programming					
	Planning					
	Plant Maintenance					
	Project Management					
	Records Management			X		
	Risk Analysis					
	Work Schedule, Management					

EXHIBIT II-1: KEY APPLICATIONS BY INDUSTRY

Application Category	Industry Application	WHOLES.	RETAIL	FIN/BANK	INSUR.	SECUR.	FED.
Accounting & Finance	Accounting	X	X	X	X	X	X
	MRP & Related	X	X				
Billing/Processing	Billing	X	X	X			
	Card Processing			X			
	Claims Processing				X		
	Clearance & Settlement			X		X	
	Collection, Assessment						
	Collection/Analysis		X	X			
	Patient Management						
	Payment Processing				X		
	Reservation Systems						
Customer Service	Customer Service	X	X				
Data Collections	Automatic Meter Reading						
	Order Entry	X	X				
	POS & Related	X	X	X			
Human Resources	Benefits Admin.			X			
	Ed. Process Monitoring						
	Employee Training						
	Personnel Mngmt.						
Marketing	Marketing	X	X		X		
	Merchandising		X				
Office Info Systems	Agent Systems				X		
	Decision Support			X			
	Desktop Publishing						
	Integrated Publishing						
	Integrated Communications						
	Integrated Hospital Sys.						
	Networks	X					
	Office Info Systems						X
Operation Automation	Application Development						
	Automated Warehouse	X	X				
	CAD/CAE						
	Consumer Loan			X			
	Correspondent Banking			X			
	Integrated Logistics	X					X
	Inventory Management						
	Laboratory Automation						
	List Management						
	Operations						
	Portfolio Management			X	X	X	
	Process Control						
	Public Safety & CAD						
	Securities Transfer			X		X	
	Trading & Funds Systems			X	X	X	
Tracking & Analysis	Audience Analysis						
	Case Load Management						
	Court & Criminal Justice						
	Geographic Info Systems		X				
	Maintenance Scheduling						
	Linear Programming						
	Planning						
	Plant Maintenance						
	Project Management						
	Records Management						X
	Risk Analysis				X		
	Work Schedule, Management						X

VENDOR	SYSTEMS OPERATIONS	PROFESSIONAL SERVICES	SYSTEMS INTEGRATION	GRAND TOTAL TOTAL
International Business Machines	190	798	523	1511
Andersen Consulting	96	327	651	1073.5
Computer Sciences Corporation	502	648	221	1370.5
Electronic Data Systems	1300	520	370	2190
Unisys	40	202	147	389.4
Systems Applications Int'n'l Corp.	40	90	211	341
Digital Equipment	43	270	203	516.2
Martin Marietta Info. Systems	84	166	129	379
Boeing Computer Services	95	35	67	197
AGS Computers/NYNEX	3	158	35	196
BDM International/Ford	75	200	20	295
McDonnell Douglas Systems Integration	16	109	32	157
Arthur D. Little		167		167
Planning Research Corporation/ATI	40	183	124	347
Control Data Corporation	10	150	44	204
Computer Task Group	9	190	18	216.7
Deloitte & Touche	5	149	17	171
AT&T				
KPMG (Peat Marwick)	6	118	27	151
Cap Gemini America	8	181	16	204.8
Price Waterhouse		63	12	75
National Education Corporation	1	107	2	110
Grumman Data Systems	25	165	49	239
American Management Systems	44	77	20	141.4
TRW, Inc.	41	120	1	162
Cincinnati Bell Information Services	14	94	2	110.3
Coopers & Lybrand	5	142	49	196.4
Ernst & Young	4	179	30	213
SHL Systemhouse	24	25	74	123
DMR		62		62
Analysts International		117	1	118
CACI, Inc.	2	86		88.2
Bechtel Information Technology	4	61		65
Analytical Sciences Corp. (The)		25		25
Computer Horizons	1	88	5	94
COMARCO	22	38		60
Comp. Data Sys (US West)	14	81		95
Telos Corp.	10	64		74
Moore DB Services	2	9		11
Keane, Inc.	4	91	5	100
Syscon Corporation	39	71		110
Fluor	1	21		22
Policy Management Systems	40	45		85
Lockheed	3	39		42
Bolt Beranek And Newman		118	1	119
Comshare	1	30		31
Computer Power Group Americas	27	59	2	88
Harris		65	1	66

Exhibit II-2

VENDOR	SYSTEMS OPERATIONS	GRAND TOTAL PROFESSIONAL SERVICES	SYSTEMS INTEGRATION	TOTAL
Booz, Allen & Hamilton		149	2	151
Continuum Company (The)	12	40		52
Oracle Complex Systems		50	1	51
Wang Laboratories		73		73
Dynamics Research	17	1		18
Litton Computer Services	28	25		53
SEI Corporation	37	31		68
Sterling Software	16	4		20
General Instruments	4	18		22
Systems & Computer Technology	54	20	4	78
Logica/Data Architects		39	1	39.6
Science Management Corp.	1	3		4
HBO & Company	62	28		90
Prime/Computervision		125	1	126
Texas Instruments	1	43	3	47.4
Securities Industry Automation	138	33		171
NCR	11	220	1	232
MARC, Inc.		24		24
Metier Management		33		33
Agway	25	7		32
SAS Institute		18		18
Deere Technical Services		11		11
Symantec		23		23
ASK Computer Systems		26		26
GTE	12	36		48
Disclosure, Inc.	21	18		39
Genix	31	10		41
Softech, Inc.	1	46		47
Shared Medical Systems	161	25		186
Combustion Engineering		15		15
Citicorp Information Resources	28	4		32
Hewlett-Packard	1	130		132
Allen-Bradley	2	59		61
CAPSO PALLM Systems		15		15
Amex including First Data	8	32		40
Baxter-Travenol Laboratories		17		17
VISA USA	5			5
American Software		43		43
Ameritech		21		21
Compucare	10	17		27
John Hancock Health Plans	13	12		25
Meditech		17		17
Triad		9		9
Pentamation	3	9		12
Cycare Systems	19	5		24
Automated Data Processing	9	3		12
Intermetrics		23		23
Tandem Computers		42		42
Perot Systems	65	56		121
Babcock & Wilcox		14		14
Compugraphic	1	7		8

VENDOR	SYSTEMS OPERATIONS	PROFESSIONAL SERVICES	SYSTEMS INTEGRATION	GRAND TOTAL TOTAL
EI International		4		4
DST Systems	65	10		75
XEROX Computer Services	2	17		19
GEIS Co	26	48		74
Teknekron Financial Services		9		9
May & Speh	12			11.5
Effective Management		6		6
XL/Systems		39		39
Logicon		217		217
Comtex	1	21		22
Computer Curriculum Corporation		4		4
Compuware		31		31
Fiserv	90	6		96
Groupe Bull		153	1	154
Apple Computer		18		18
Adia		33		33
Automated Business Systems		8		8
Brandon Systems		39		39
Centel	33	45		78
Computer Associates Inc.		71		71
Covia	57	4		61
Technicon	30	2		32
Data General	4	35		39
Technalysis		24		24
Dun & Bradstreet		35		35
McKinsey		112		112
Affiliated	202	2		204
Shared Financial		29		29
Global Info. Systems Technology		7		7
ISI	26	4		30
McGraw-Hill, Inc.		7		7
Mellon Bank	45	11		56
Merrill Corporation	1	2		3
First Financial Mgmt.	125	30		155
Cadence		28		28
National Computer Systems		28		28
TSC		75		75
Newtrend Group	5	2		7
On-Line Computer Library Center	40	3		43
Wicat	4	20	2	26
Ross		17		17
Security Pacific Corporation	9	20		29
Systematics	175	15		190
Total Systems Services	7			7
Fujitsu	2	51		53
Network Systems	4	21		25
IMI		6		6
RCG		100		100
SAP America		14		14
Warner	26	6		32
MCI	6	17		23
Computerland	1	34		35
ERI	11	3		14

Exhibit II-3A

VENDOR	MANUFACTURING TOTAL	AUTOMOTIVE TOTAL	AEROSPACE TOTAL	ELECTRICAL MACHINE TOTAL
TOTAL MARKET ($M)	2252	385	534	1041
TOTAL ACCOUNTED (%)	54%	57%	59%	57%
International Business Machines	117	25	32	44
Andersen Consulting	114	13	27	46
Computer Sciences Corporation	77	11	29	24
Electronic Data Systems	77	22	38	72
Unisys	5	10	1	1
Systems Applications Int'n'l Corp.	10		6	
Digital Equipment	64	15	6	14
Martin Marietta Info. Systems			8	
Boeing Computer Services	2			
AGS Computers/NYNEX	21	4	5	15
BDM International/Ford	12	12	13	1
McDonnell Douglas Systems Integration	13	2	12	14
Arthur D. Little	20	5	10	12
Planning Research Corporation/ATI	5			5
Control Data Corporation	5			3
Computer Task Group	43	13	8	24
Deloitte & Touche	10	2		11
AT&T				
KPMG (Peat Marwick)	6			7
Cap Gemini America	19			
Price Waterhouse	7			7
National Education Corporation	2			3
Grumman Data Systems	23	2	5	15
American Management Systems			2	
TRW, Inc.	5			3
Cincinnati Bell Information Services	2			2
Coopers & Lybrand	17	7	4	11
Ernst & Young	9		4	13
SHL Systemhouse	3			
DMR				13
Analysts International	11	11		29
CACI, Inc.	6		3	
Bechtel Information Technology	19			3
Analytical Sciences Corp. (The)	4			1
Computer Horizons	3		4	16
COMARCO	5		5	2
Comp. Data Sys (US West)	3		2	2
Telos Corp.	3		10	
Moore DB Services	1			1
Keane, Inc.	9	11		7
Syscon Corporation	14			3
Fluor	19			2
Policy Management Systems				
Lockheed	10		3	3
Bolt Beranek And Newman	12			
Comshare	10			1
Computer Power Group Americas	15			2
Harris	19			2

Exhibit II-3A

VENDOR	MANUFACTURING TOTAL	AUTOMOTIVE TOTAL	AEROSPACE TOTAL	ELECTRICAL MACHINE TOTAL
Booz, Allen & Hamilton	17	5	7	9
Continuum Company (The)				
Oracle Complex Systems	15			4
Wang Laboratories	11			1
Dynamics Research				1
Litton Computer Services	9		9	1
SEI Corporation				
Sterling Software	5			1
General Instruments	19			
Systems & Computer Technology				
Logica/Data Architects	5			
Science Management Corp.				
HBO & Company				
Prime/Computervision	19	12	9	20
Texas Instruments	7			2
Securities Industry Automation				
NCR	13			18
MARC, Inc.				
Metier Management	15	5	6	7
Agway				
SAS Institute	5			1
Deere Technical Services	6	4		1
Symantec	4			
ASK Computer Systems	5			2
GTE	2			
Disclosure, Inc.				
Genix	13	1		3
Softech, Inc.	1			1
Shared Medical Systems				
Combustion Engineering				1
Citicorp Information Resources				
Hewlett-Packard	18			13
Allen-Bradley	16	4	5	8
CAPSO PALLM Systems				
Amex including First Data				
Baxter-Travenol Laboratories				
VISA USA				
American Software	9			1
Ameritech				3
Compucare				
John Hancock Health Plans				
Meditech				
Triad		2		
Pentamation				
Cycare Systems				
Automated Data Processing				
Intermetrics	5	4	7	1
Tandem Computers	7			
Perot Systems				
Babcock & Wilcox	3			1
Compugraphic				

VENDOR	MANUFACTURING TOTAL	AUTOMOTIVE TOTAL	AEROSPACE TOTAL	ELECTRICAL MACHINE TOTAL
EI International				
DST Systems				
XEROX Computer Services	5			1
GEIS Co	10		4	2
Teknekron Financial Services				
May & Speh	1	2		1
Effective Management	2			
XL/Systems	6	5		
Logicon	2			3
Comtex				
Computer Curriculum Corporation				
Compuware	1	1	1	1
Fiserv				
Groupe Bull	16		9	6
Apple Computer				
Adia	11			
Automated Business Systems	1			
Brandon Systems	2			
Centel	3			
Computer Associates Inc.	12	1	4	2
Covia				
Technicon				
Data General	4			2
Technalysis	3			
Dun & Bradstreet	2			2
McKinsey	11		3	4
Affiliated				
Shared Financial				
Global Info. Systems Technology				
ISI	2	2	2	
McGraw-Hill, Inc.				
Mellon Bank				
Merrill Corporation				
First Financial Mgmt.				
Cadence	1			27
National Computer Systems				
TSC	6	2	3	4
Newtrend Group				
On-Line Computer Library Center				
Wicat				
Ross	4			
Security Pacific Corporation		3		
Systematics				
Total Systems Services				
Fujitsu	10		4	
Network Systems	3	1	2	
IMI				
RCG	14		5	
SAP America	5			
Warner				
MCI	1	1		
Computerland	1	1		1
ERI				

Exhibit II-38

VENDOR	CONSTRUCTION TOTAL	PROCESS TOTAL	CONSUMER TOTAL	CHEM/PHARM TOTAL
TOTAL MARKET ($M)	130	1059	310	292
TOTAL ACCOUNTED (%)	67%	61%	62%	62%
International Business Machines	11	82	11	17
Andersen Consulting	4	83	14	17
Computer Sciences Corporation	6	51	5	5
Electronic Data Systems	10	75	8	24
Unisys			1	
Systems Applications Int'n'l Corp.	2			
Digital Equipment	3	14	5	6
Martin Marietta Info. Systems				
Boeing Computer Services				
AGS Computers/NYNEX	1	9	5	2
BDM International/Ford			1	1
McDonnell Douglas Systems Integration		1	3	
Arthur D. Little		7	3	4
Planning Research Corporation/ATI	3	9	2	
Control Data Corporation	2	5	2	4
Computer Task Group	1	8	6	7
Deloitte & Touche	1	20	5	5
AT&T				
KPMG (Peat Marwick)		31	4	2
Cap Gemini America			2	
Price Waterhouse			2	3
National Education Corporation		18	2	2
Grumman Data Systems	3	2		
American Management Systems		3		
TRW, Inc.				
Cincinnati Bell Information Services				
Coopers & Lybrand		21	7	4
Ernst & Young		5	3	4
SHL Systemhouse		12		
DMR				
Analysts International		16	2	4
CACI, Inc.		6		
Bechtel Information Technology	25	11		
Analytical Sciences Corp. (The)				
Computer Horizons		7	4	3
COMARCO				
Comp. Data Sys (US West)				
Telos Corp.				
Moore DB Services				
Keane, Inc.		7	2	5
Syscon Corporation				
Fluor				
Policy Management Systems				
Lockheed		2		
Bolt Beranek And Newman	1			1
Comshare		6	4	
Computer Power Group Americas	2	6		
Harris		25	4	5

Exhibit II-38

VENDOR	CONSTRUCTION TOTAL	PROCESS TOTAL	CONSUMER TOTAL	CHEM/PHARM TOTAL
Booz, Allen & Hamilton		10	3	5
Continuum Company (The)				
Oracle Complex Systems		2		2
Wang Laboratories				
Dynamics Research				
Litton Computer Services				2
SEI Corporation				
Sterling Software				
General Instruments				
Systems & Computer Technology				
Logica/Data Architects	2			
Science Management Corp.				
HBO & Company				
Prime/Computervision	2	11		3
Texas Instruments	1			
Securities Industry Automation				
NCR	2	8		4
MARC, Inc.				
Metier Management				
Agway		1	27	
SAS Institute				
Deere Technical Services				
Symantec				
ASK Computer Systems		7	2	3
GTE				
Disclosure, Inc.				
Genix		1		3
Softech, Inc.			1	
Shared Medical Systems				
Combustion Engineering				
Citicorp Information Resources				
Hewlett-Packard	2	14	4	3
Allen-Bradley	1	4		
CAPSO PALLM Systems				
Amex including First Data				
Baxter-Travenol Laboratories				
VISA USA				
American Software		6	3	
Ameritech				
Compucare				
John Hancock Health Plans				
Meditech				
Triad				
Pentamation				
Cycare Systems				
Automated Data Processing				
Intermetrics				
Tandem Computers			2	
Perot Systems		10		
Babcock & Wilcox				
Compugraphic				

VENDOR	CONSTRUCTION TOTAL	PROCESS TOTAL	CONSUMER TOTAL	CHEM/PHARM TOTAL
EI International				
DST Systems				
XEROX Computer Services		3	3	
GEIS Co		2		
Teknekron Financial Services				
May & Speh				
Effective Management				
XL/Systems				
Logicon				
Comtex				
Computer Curriculum Corporation				
Compuware		1	1	1
Fiserv				
Groupe Bull	2	9	4	3
Apple Computer				
Adia		2		1
Automated Business Systems				
Brandon Systems				
Centel				
Computer Associates Inc.		6	1	1
Covia				
Technicon				2
Data General				
Technalysis				
Dun & Bradstreet			2	
McKinsey	6		6	8
Affiliated				
Shared Financial				
Global Info. Systems Technology				
ISI				
McGraw-Hill, Inc.				
Mellon Bank				
Merrill Corporation				
First Financial Mgmt.				
Cadence				
National Computer Systems				
TSC	6		27	4
Newtrend Group				
On-Line Computer Library Center				
Wicat				
Ross				
Security Pacific Corporation				
Systematics				
Total Systems Services				
Fujitsu				2
Network Systems				
IMI				
RCG				
SAP America				8
Warner				
MCI				
Computerland				
ERI				

Exhibit II-3C

VENDOR	PETROLEUM TOTAL	R/G/M TOTAL	COMMUNICATIONS TOTAL	COMPUTER SERVICES TOTAL
TOTAL MARKET ($M)	579	504	1035	75
TOTAL ACCOUNTED (%)	58%	56%	60%	65%
International Business Machines	42	26	41	3
Andersen Consulting	46	14	43	2.5
Computer Sciences Corporation	15	12	47	4
Electronic Data Systems	61	35	45	3
Unisys	6	4	27	3
Systems Applications Int'n'l Corp.				
Digital Equipment	16	15	43	3
Martin Marietta Info. Systems				
Boeing Computer Services		1	3	1
AGS Computers/NYNEX	3	5	23	
BDM International/Ford	4	5		
McDonnell Douglas Systems Integration			6	1
Arthur D. Little	5	4	7	
Planning Research Corporation/ATI		1		
Control Data Corporation	4	3		
Computer Task Group	12	5	23	3
Deloitte & Touche	7	4		
AT&T				
KPMG (Peat Marwick)	5	1		
Cap Gemini America		3	37	2.5
Price Waterhouse	5	3	1	
National Education Corporation	3	2	8	
Grumman Data Systems		2		1
American Management Systems			22	
TRW, Inc.			8	1
Cincinnati Bell Information Services			45	1
Coopers & Lybrand	12	6	4	
Ernst & Young	6	3	12	
SHL Systemhouse			24	
DMR			7	
Analysts International	5	2	8	1
CACI, Inc.	4	2		2.2
Bechtel Information Technology		6		
Analytical Sciences Corp. (The)		1		
Computer Horizons	3	3	18	
COMARCO				
Comp. Data Sys (US West)			6	
Telos Corp.			2	
Moore DB Services		1		1
Keane, Inc.		2	9	
Syscon Corporation				
Fluor		1		
Policy Management Systems				
Lockheed				
Bolt Beranek And Newman	3	1	4	
Comshare				1
Computer Power Group Americas	4	9	12	
Harris	4	1		

VENDOR	PETROLEUM TOTAL	R/G/M TOTAL	COMMUNICATIONS TOTAL	COMPUTER SERVICES TOTAL
Booz, Allen & Hamilton	3	5	5	
Continuum Company (The)				
Oracle Complex Systems	4			
Wang Laboratories		3		
Dynamics Research				
Litton Computer Services		1		
SEI Corporation				
Sterling Software		1		
General Instruments		3		
Systems & Computer Technology				
Logica/Data Architects			2	2.6
Science Management Corp.				
HBO & Company				
Prime/Computervision		5		
Texas Instruments		2		
Securities Industry Automation				
NCR	3	16		
MARC, Inc.				
Metier Management				
Agway				
SAS Institute		1		
Deere Technical Services				
Symantec				
ASK Computer Systems	5	2		
GTE	2		2	1
Disclosure, Inc.				
Genix	1	1		
Softech, Inc.				
Shared Medical Systems				
Combustion Engineering				
Citicorp Information Resources				
Hewlett-Packard	2	3	11	1
Allen-Bradley	4	2		
CAPSO PALLM Systems				
Amex including First Data				
Baxter-Travenol Laboratories				
VISA USA				
American Software	2	3		
Ameritech		3		
Compucare				
John Hancock Health Plans				
Meditech				
Triad				
Pentamation				
Cycare Systems				
Automated Data Processing				
Intermetrics				1
Tandem Computers		1		1
Perot Systems		4		
Babcock & Wilcox	1	3		
Compugraphic				

VENDOR	PETROLEUM TOTAL	R/G/M TOTAL	COMMUNICATIONS TOTAL	COMPUTER SERVICES TOTAL
EI International	1			
DST Systems				
XEROX Computer Services				
GEIS Co	4	4		
Teknekron Financial Services				
May & Speh				
Effective Management				
XL/Systems		2		1
Logicon				
Comtex				1
Computer Curriculum Corporation				
Compuware	1		2	
Fiserv				
Groupe Bull	2	6		
Apple Computer				
Adia		2		1
Automated Business Systems		1		
Brandon Systems		1	4	1
Centel		2		
Computer Associates Inc.	2	4		
Covia				
Technicon				
Data General			3	1
Technalysis				
Dun & Bradstreet		2	1	
McKinsey	9	6	2	
Affiliated			10	
Shared Financial				
Global Info. Systems Technology				
ISI				
McGraw-Hill, Inc.				
Mellon Bank				
Merrill Corporation				
First Financial Mgmt.				
Cadence				
National Computer Systems				
TSC	8	4	1	
Newtrend Group				
On-Line Computer Library Center				
Wicat				
Ross				
Security Pacific Corporation				
Systematics				
Total Systems Services				
Fujitsu		5	10	2
Network Systems		1	9	
IMI			5	
RCG	5		7	1
SAP America				
Warner			1	
MCI			6	
Computerland			3	
ERI				

Exhibit II-30

VENDOR	CONSULTANTS TOTAL	HEALTH TOTAL	HIGHER EDUCATION TOTAL	MEDIA TOTAL
TOTAL MARKET ($M)	48	1870	736	944
TOTAL ACCOUNTED (%)	68%	56%	55%	55%
International Business Machines	3	55	25	44
Andersen Consulting	2	60	11	47
Computer Sciences Corporation	2.8	64	14	17
Electronic Data Systems	2	91	28	24
Unisys	1.4	17	10	5
Systems Applications Int'n'l Corp.				
Digital Equipment	1.2	43	20	7
Martin Marietta Info. Systems			1	
Boeing Computer Services				2
AGS Computers/NYNEX	2	8	8	7
BDM International/Ford			5	
McDonnell Douglas Systems Integration		30	2	7
Arthur D. Little		12	3	2
Planning Research Corporation/ATI	1	20	6	7
Control Data Corporation		2	7	17
Computer Task Group	1.7	2	2	12
Deloitte & Touche		16	2	9
AT&T				
KPMG (Peat Marwick)			8	5
Cap Gemini America	1.3	14	6	13
Price Waterhouse		3	3	2
National Education Corporation		10		12
Grumman Data Systems			4	4
American Management Systems	0.4		15	
TRW, Inc.				5
Cincinnati Bell Information Services	1.3		8	20
Coopers & Lybrand	1.4	9	8	11
Ernst & Young		7	8	19
SHL Systemhouse				4
DMR				6
Analysts International	1		1	4
CACI, Inc.				6
Bechtel Information Technology				
Analytical Sciences Corp. (The)				
Computer Horizons		1		5
COMARCO				
Comp. Data Sys (US West)			7	3
Telos Corp.			1	3
Moore DB Services				
Keane, Inc.	1	21		
Syscon Corporation				
Fluor				
Policy Management Systems				
Lockheed				
Bolt Beranek And Newman		1	1	5
Comshare	1			3
Computer Power Group Americas	1			6
Harris				

Exhibit II-30

	CONSULTANTS	HEALTH	HIGHER EDUCATION	MEDIA
VENDOR	TOTAL	TOTAL	TOTAL	TOTAL
Booz, Allen & Hamilton		6	3	6
Continuum Company (The)				
Oracle Complex Systems			3	1
Wang Laboratories	1	10		9
Dynamics Research				
Litton Computer Services				1
SEI Corporation				
Sterling Software				
General Instruments				
Systems & Computer Technology			31	
Logica/Data Architects				
Science Management Corp.				
HBO & Company		90		
Prime/Computervision	1	1	9	8
Texas Instruments	0.4		12	1
Securities Industry Automation				
NCR		8	14	10
MARC, Inc.				19
Metier Management				
Agway				
SAS Institute			3	
Deere Technical Services				
Symantec				
ASK Computer Systems				
GTE	12	7		3
Disclosure, Inc.				
Genix				3
Softech, Inc.				
Shared Medical Systems	186			
Combustion Engineering				
Citicorp Information Resources				
Hewlett-Packard	4	5		11
Allen-Bradley	2	6		6
CAPSO PALLM Systems				
Amex including First Data	10			
Baxter-Travenol Laboratories	17			
VISA USA				
American Software	4			
Ameritech				9
Compucare	27			
John Hancock Health Plans	22			
Meditech	17			
Triad				
Pentamation	5			
Cycare Systems	24			
Automated Data Processing				
Intermetrics	1			
Tandem Computers	2			2
Perot Systems	19	3		10
Babcock & Wilcox				
Compugraphic				8

VENDOR	CONSULTANTS TOTAL	HEALTH TOTAL	HIGHER EDUCATION TOTAL	MEDIA TOTAL
EI International				
DST Systems				
XEROX Computer Services				5
GEIS Co		2		3
Teknekron Financial Services				
May & Speh	0.5			2
Effective Management				
XL/Systems		10		
Logicon				
Comtex				1
Computer Curriculum Corporation				
Compuware	2	2	1	2
Fiserv				
Groupe Bull		2	7	9
Apple Computer			8	
Adia	1			
Automated Business Systems			1	2
Brandon Systems				
Centel				
Computer Associates Inc.		2	2	2
Covia				2
Technicon		30		
Data General		6	1	
Technalysis		1		1
Dun & Bradstreet			1	4
McKinsey		3		6
Affiliated		5		13
Shared Financial				
Global Info. Systems Technology			1	
ISI				
McGraw-Hill, Inc.			2	1
Mellon Bank				
Merrill Corporation				2
First Financial Mgmt.		25		
Cadence				
National Computer Systems			9	
TSC		2		
Newtrend Group				
On-Line Computer Library Center			43	
Wicat			9	3
Ross				3
Security Pacific Corporation				
Systematics				
Total Systems Services				
Fujitsu			6	
Network Systems		2		1
IMI				
RCG				4
SAP America				1
Warner			2	1
MCI			1	1
Computerland	1	3	1	4
ERI				

Exhibit II-3E

VENDOR	SCHOOLS TOTAL	S&L GOVERNMENT TOTAL	TRANSPORTATION TOTAL	UTILITIES TOTAL
TOTAL MARKET ($M)	456	2451	378	453
TOTAL ACCOUNTED (%)	55%	55%	62%	65%
International Business Machines	12	65	14	28
Andersen Consulting	4	69	14	46
Computer Sciences Corporation	17	96	7	17
Electronic Data Systems	15	214	19	20
Unisys	11	50	16	
Systems Applications Int'n'l Corp.		14		
Digital Equipment	15	30	4	30
Martin Marietta Info. Systems		23		
Boeing Computer Services	7	32		
AGS Computers/NYNEX	5	17		6
BDM International/Ford		19		
McDonnell Douglas Systems Integration		19	12	5
Arthur D. Little		27	8	7
Planning Research Corporation/ATI	3	43		17
Control Data Corporation	8	16	8	20
Computer Task Group	5	9		2
Deloitte & Touche	2	22	1	
AT&T				
KPMG (Peat Marwick)	2	20	3	5
Cap Gemini America	8	17		2
Price Waterhouse	2	12		3
National Education Corporation	1	3	3	
Grumman Data Systems	2	44		
American Management Systems	10	29		
TRW, Inc.		15		
Cincinnati Bell Information Services	5	17		
Coopers & Lybrand	1	18		10
Ernst & Young	2	33	3	4
SHL Systemhouse		36		
DMR				
Analysts International	1	1		
CACI, Inc.	1	3		
Bechtel Information Technology				
Analytical Sciences Corp. (The)	1		9	
Computer Horizons	2	4	4	
COMARCO				
Comp. Data Sys (US West)	1	19		
Telos Corp.		5		
Moore DB Services	1	3		
Keane, Inc.	1	2		2
Syscon Corporation				
Fluor				
Policy Management Systems				
Lockheed		15	7	
Bolt Beranek And Newman		2		
Comshare	2	1		
Computer Power Group Americas	1	6	6	7
Harris		4	2	

Exhibit II-3E

VENDOR	SCHOOLS TOTAL	S&L GOVERNMENT TOTAL	TRANSPORTATION TOTAL	UTILITIES TOTAL
Booz, Allen & Hamilton	2	11	5	2
Continuum Company (The)				
Oracle Complex Systems	4	6		3
Wang Laboratories		17		
Dynamics Research				
Litton Computer Services			2	
SEI Corporation				
Sterling Software				
General Instruments				
Systems & Computer Technology	18	29		
Logica/Data Architects			3	
Science Management Corp.	4			
HBO & Company				
Prime/Computervision	5	3		2
Texas Instruments	7	4	4	
Securities Industry Automation				
NCR	4	31		2
MARC, Inc.				
Metier Management				
Agway				
SAS Institute	2	3	1	
Deere Technical Services				
Symantec	1			
ASK Computer Systems				
GTE	3	5		
Disclosure, Inc.				
Genix	1			4
Softech, Inc.		4		
Shared Medical Systems				
Combustion Engineering				14
Citicorp Information Resources		1		
Hewlett-Packard	5	12		2
Allen-Bradley	1			
CAPSO PALLM Systems				
Amex including First Data		26		
Baxter-Travenol Laboratories				
VISA USA				
American Software			2	3
Ameritech	1			
Compucare				
John Hancock Health Plans				
Meditech				
Triad				
Pentamation	5			
Cycare Systems				
Automated Data Processing				
Intermetrics			2	
Tandem Computers		1		
Perot Systems		2		
Babcock & Wilcox				6
Compugraphic				

Exhibit II-3E

VENDOR	SCHOOLS TOTAL	S&L GOVERNMENT TOTAL	TRANSPORTATION TOTAL	UTILITIES TOTAL
EI International				3
DST Systems				
XEROX Computer Services		2		
GEIS Co	1	6		2
Teknekron Financial Services				
May & Speh				
Effective Management				
XL/Systems				
Logicon				
Comtex				
Computer Curriculum Corporation	4			
Compuware	1	2	1	1
Fiserv				
Groupe Bull	5	21		2
Apple Computer	4	6		
Adia			1	3
Automated Business Systems	1			
Brandon Systems		3		4
Centel				
Computer Associates Inc.	2	8		3
Covia			59	
Technicon				
Data General		5		
Technalysis		3	1	
Dun & Bradstreet	2	6		
McKinsey		13		
Affiliated			10	
Shared Financial				
Global Info. Systems Technology	2	3		
ISI				
McGraw-Hill, Inc.	2	2		
Mellon Bank				
Merrill Corporation		1		
First Financial Mgmt.			2	
Cadence				
National Computer Systems	2			
TSC		1	1	1
Newtrend Group				
On-Line Computer Library Center				
Wicat	11	3		
Ross		2	2	
Security Pacific Corporation				
Systematics				
Total Systems Services				
Fujitsu				
Network Systems				
IMI				
RCG		10		
SAP America				
Warner				
MCI		4		
Computerland	3	6		
ERI		5		6

VENDOR	WHOLESALE DIST. TOTAL	RETAIL DIST. TOTAL	FINANCE TOTAL	INSURANCE TOTAL
TOTAL MARKET ($M)	730	1068	3692	2579
TOTAL ACCOUNTED (%)	58%	57%	56%	56%
International Business Machines	51	48	125	115
Andersen Consulting	35	62	97	120
Computer Sciences Corporation	42	32	84	93
Electronic Data Systems	50	77	177	455
Unisys	13	29	39	10
Systems Applications Int'n'l Corp.			14	
Digital Equipment	10	32	35	11
Martin Marietta Info. Systems				
Boeing Computer Services				8
AGS Computers/NYNEX	5	11	21	8
BDM International/Ford	2			
McDonnell Douglas Systems Integration	3	5	5	17
Arthur D. Little	14			17
Planning Research Corporation/ATI		2		
Control Data Corporation	9	15	6	15
Computer Task Group	8		2	12
Deloitte & Touche	9	11	8	23
AT&T				
KPMG (Peat Marwick)	4	7	23	16
Cap Gemini America			43	32
Price Waterhouse		3	8	11
National Education Corporation	2		16	16
Grumman Data Systems	2		5	
American Management Systems			21	
TRW, Inc.		12	72	10
Cincinnati Bell Information Services		1	4	
Coopers & Lybrand	10	13	14	7
Ernst & Young	16	15	15	28
SHL Systemhouse	1			
DMR		8	11	17
Analysts International		4	7	8
CACI, Inc.	6		2	3
Bechtel Information Technology				
Analytical Sciences Corp. (The)	7		2	
Computer Horizons	9	2	5	
COMARCO				
Comp. Data Sys (US West)				
Telos Corp.				
Moore DB Services			3	
Keane, Inc.		1	4	17
Syscon Corporation				
Fluor				
Policy Management Systems				85
Lockheed				
Bolt Beranek And Newman			4	4
Comshare				
Computer Power Group Americas	2	1	6	2
Harris				

VENDOR	WHOLESALE DIST. TOTAL	RETAIL DIST. TOTAL	FINANCE TOTAL	INSURANCE TOTAL
Booz, Allen & Hamilton	4	5	18	9
Continuum Company (The)				52
Oracle Complex Systems		3	8	5
Wang Laboratories			5	15
Dynamics Research				
Litton Computer Services	7	8	2	3
SEI Corporation			68	
Sterling Software				
General Instruments				
Systems & Computer Technology				
Logica/Data Architects			16	7
Science Management Corp.				
HBO & Company				
Prime/Computervision		7	5	4
Texas Instruments			6	
Securities Industry Automation			26	
NCR	19	34	33	7
MARC, Inc.			5	
Metier Management				
Agway	3	1		
SAS Institute			2	
Deere Technical Services				
Symantec	5	11	2	
ASK Computer Systems				
GTE		8	3	
Disclosure, Inc.				
Genix		6		4
Softech, Inc.				
Shared Medical Systems				
Combustion Engineering				
Citicorp Information Resources			21	
Hewlett-Packard	6	6	6	2
Allen-Bradley		2		
CAPSO PALLM Systems				15
Amex including First Data			4	
Baxter-Travenol Laboratories				
VISA USA				
American Software	4	3	4	
Ameritech			5	
Compucare				
John Hancock Health Plans				3
Meditech				
Triad	2	5		
Pentamation	2			
Cycare Systems				
Automated Data Processing			3	
Intermetrics				2
Tandem Computers	4	2	9	5
Perot Systems			31	28
Babcock & Wilcox				
Compugraphic				

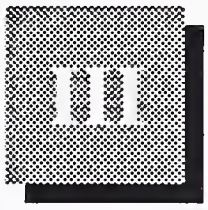
Exhibit II-3F

VENDOR	WHOLESALE DIST. TOTAL	RETAIL DIST. TOTAL	FINANCE TOTAL	INSURANCE TOTAL
EI International				
DST Systems			71	
XEROX Computer Services				
GEIS Co	5	8	18	3
Teknekron Financial Services			6	
May & Speh	1		4	
Effective Management	2	2		
XL/Systems	8	7		
Logicon				
Comtex			17	
Computer Curriculum Corporation				
Compuware	2	2	2	2
Fiserv			96	
Groupe Bull	7	12	19	8
Apple Computer				
Adia	3		2	6
Automated Business Systems		2		
Brandon Systems			20	3
Centel				
Computer Associates Inc.	3	4	10	
Covia				
Technicon				
Data General			7	4
Technalysis		5	10	
Dun & Braostreet	3	5	5	
McKinsey		1	25	12
Affiliated	2	35	127	
Shared Financial		3	22	
Global Info. Systems Technology		1		
ISI				24
McGraw-Hill, Inc.				
Mellon Bank			55	
Merrill Corporation				
First Financial Mgmt.		3	125	
Cadence				
National Computer Systems			17	
TSC		1	4	
Newtrend Group			7	
On-Line Computer Library Center				
Wicat				
Ross	3	1	2	
Security Pacific Corporation			15	
Systematics			190	
Total Systems Services			7	
Fujitsu	2		12	
Network Systems	2		2	
IMI				
RCG	7	9	17	23
SAP America				
Warner				26
MCI	1	4		
Computerland	3	4	5	
ERI		3		

VENDOR	SECURITIES TOTAL	FED GOVERNMENT TOTAL	GRAND TOTAL TOTAL
TOTAL MARKET ($M)	766	5061	29428
TOTAL ACCOUNTED (%)	56%	81%	61%
International Business Machines	19	456	1511
Andersen Consulting	23	60	1073.5
Computer Sciences Corporation	9	590	1370.5
Electronic Data Systems	16	532	2190
Unisys	3	127	389.4
Systems Applications Int'n'l Corp.		295	341
Digital Equipment	8	66	516.2
Martin Marietta Info. Systems		347	379
Boeing Computer Services		141	197
AGS Computers/NYNEX	5		196
BDM International/Ford		220	295
McDonnell Douglas Systems Integration			157
Arthur D. Little			167
Planning Research Corporation/ATI	1	224	347
Control Data Corporation	1	52	204
Computer Task Group	6		216.7
Deloitte & Touche	3		171
AT&T			
KPMG (Peat Marwick)	2		151
Cap Gemini America	5		204.8
Price Waterhouse			75
National Education Corporation	7		110
Grumman Data Systems	2	123	239
American Management Systems		39	141.4
TRW, Inc.	8	23	162
Cincinnati Bell Information Services		4	110.3
Coopers & Lybrand	6		196.4
Ernst & Young	4		213
SHL Systemhouse		43	123
DMR			62
Analysts International	2		118
CACI, Inc.		44	88.2
Bechtel Information Technology		1	65
Analytical Sciences Corp. (The)			25
Computer Horizons	1		94
COMARCO		48	60
Comp. Data Sys (US West)		52	95
Telos Corp.		50	74
Moore DB Services			11
Keane, Inc.	1		100
Syscon Corporation		93	110
Fluor			22
Policy Management Systems			85
Lockheed		2	42
Bolt Beranek And Newman	2	78	119
Comshare	2		31
Computer Power Group Americas			88
Harris			66

VENDOR	SECURITIES TOTAL	FED GOVERNMENT TOTAL	GRAND TOTAL
Booz, Allen & Hamilton	5	1	151
Continuum Company (The)			52
Oracle Complex Systems			51
Wang Laboratories	1		73
Dynamics Research		17	18
Litton Computer Services		8	53
SEI Corporation			68
Sterling Software		16	20
General Instruments			22
Systems & Computer Technology			78
Logica/Data Architects	2		39.6
Science Management Corp.			4
HBO & Company			90
Prime/Computervision			126
Texas Instruments	1		47.4
Securities Industry Automation	145		171
NCR	6		232
MARC, Inc.			24
Metier Management			33
Agway			32
SAS Institute			18
Deere Technical Services			11
Symantec			23
ASK Computer Systems			26
GTE			48
Disclosure, Inc.	39		39
Genix			41
Softech, Inc.		40	47
Shared Medical Systems			186
Combustion Engineering			15
Citicorp Information Resources	10		32
Hewlett-Packard	2		132
Allen-Bradley			61
CAPSO PALLM Systems			15
Amex including First Data			40
Baxter-Travenol Laboratories			17
VISA USA	5		5
American Software			43
Ameritech			21
Compucare			27
John Hancock Health Plans			25
Meditech			17
Triad			9
Pentamation			12
Cycare Systems			24
Automated Data Processing	9		12
Intermetrics			23
Tandem Computers	6		42
Perot Systems			121
Babcock & Wilcox			14
Compugraphic			8

VENDOR	SECURITIES TOTAL	FED GOVERNMENT TOTAL	GRAND TOTAL
EI International			4
DST Systems	4		75
XEROX Computer Services			19
GEIS Co			74
Teknekron Financial Services	3		9
May & Speh			11.5
Effective Management			6
XL/Systems			39
Logicon		212	217
Comtex	3		22
Computer Curriculum Corporation			4
Compuware	1		31
Fiserv			96
Groupe Bull	5		154
Apple Computer			18
Adia			33
Automated Business Systems			8
Brandon Systems	1		39
Centel		73	78
Computer Associates Inc.	2		71
Covia			61
Technicon			32
Data General	6		39
Technalysis			24
Dun & Bradstreet			35
McKinsey	3		112
Affiliated	2		204
Shared Financial	4		29
Global Info. Systems Technology			7
ISI			30
McGraw-Hill, Inc.			7
Mellon Bank	1		56
Merrill Corporation			3
First Financial Mgmt.			155
Cadence			28
National Computer Systems			28
TSC			75
Newtrend Group			7
On-Line Computer Library Center			43
Wicat			26
Ross			17
Security Pacific Corporation	11		29
Systematics			190
Total Systems Services			7
Fujitsu			53
Network Systems	2		25
IMI	1		6
RCG	5		100
SAP America			14
Warner	2		32
MCI	4		23
Computerland	1		35
ERI			14



Industry Analyses

A
Manufacturing

1. Professional Services-Related Industry Issues

There are issues shared with industries outside of manufacturing including the use of open systems and greater use of LANs and client/server systems. There is also continuing pressure to reduce costs and/or increase productivity. Other continuing pressures also encountered in other industry markets include those to speed up transaction processing; integrate networks, databases and applications; overcome shortages of high level IS personnel; and increase use of electronic information. There is also increased attention to customer support/service and increased use of EDI and automated electronic information to supply information on supplies and finished goods.

The unique issues in manufacturing that can have an impact on professional services include an increasing level of connectivity between systems and equipment including automated warehouse and robot devices in manufacturing establishments, increased attention to means of monitoring and controlling quality and continuing attempts to monitor customer problems and purchasing activities. Other areas receiving increased attention include the linking of the design engineers with the manufacturing engineers and the implementation of flexible manufacturing systems. Market drivers include shortened product life, rapidly changing market demands, and the interest to enter niche markets.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Price Waterhouse	Inventory	Cyclops Industry	Prop.
Votan	Voice recognition system	Norwalk Furniture	"
CIMLINC	CIM turnkey on PC	Cincinnati Milacron	"
Coopers & Lybrand	MRP	Kenner Parker Toys	Prop.
DEC	Improving mfg. productivity	Reemay	Prop.
TSC	Customer Service	Whirlpool	Prop.
Andersen	Plant of the Future	Caterpillar	Prop.
ISSC	System Operations	Kodak	500.0
TSC	Imaging Consulting	Xerox	Prop.
SAP America	Multinational software systems for financial accounting	Schindler Elevator Corp.	Prop.

B

Automotive

1. Professional Services-Related Industry Issues

Issues shared with industries outside of automotive manufacturing include an interest in upgrading customer service and ordering systems to take advantage of recovery in industry markets as well as high levels of pressure to reduce costs, increase productivity; speed up transaction processing, further integrate networks, databases and applications; address shortages of high level IS personnel, and increase use of electronic information. Other shared issues include expanded use of LANs, client server technology and open systems. As in many other industries, the use of client/server technology and LANs have been employed to downsize selected applications. Automotive manufacturing is also one of the industries showing marked interest in the use of EDI and in the use of electronic information to represent part numbers and supply information on materials and technology.

Issues that are unique in this vertical market that can have an impact on professional services are similar to those in other discrete manufacturing segments generally and include the use of LANs and client/server systems to achieve greater integration in manufacturing and continually increasing complex connectivity between systems and equipment including robot devices in manufacturing establishments, increased attention to means of monitoring and controlling quality and continuing attempts to monitor customer problems and purchasing activities. Other areas receiving increased attention include the linking of the design engineers with the manufacturing engineers and the implementation of flexible manufacturing systems. Market drivers include shortened product life, the desire to consolidate certain operations to achieve greater economy while maintaining the ability to differentiate products, rapidly changing market demands, and the interest to enter niche markets and participate in manufacturing arrangements with other companies.

In the face of a period of reduced demand and increased competition the automotive sector is striving to make necessary investments. Foreign-owned operations have so far proved difficult for U.S.-based systems vendors to penetrate and do business with.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Anatec	Engineering Financial	Ford	Prop.
BDM	CAD/CAM Consulting	Ford	Prop.
Unisys	System Operations	Subaru	45.0

C

Aerospace

1. Professional Services-Related Industry Issues

Issues shared with other vertical groups include increasing pressure to reduce costs and/or increase productivity, particularly in view of reductions in DOD expenditures and increasing competition from existing vendors in the market; pressure to speed up transaction processing, integrate networks, databases and applications; a need to deal with shortages of high level IS personnel; increasing interest in information engineering and reengineering; increased use of electronic information; increasing attention to customer support/service and high use of customization. In

addition to EDI, aerospace manufacturing is experiencing a growing impact from the use of electronic information to represent parts or manufactured goods, which is happening to some extent in a some other industries. In aerospace, part numbers are being used that can be communicated directly to machines (e.g., Product Description - P-DES).

Unique issues in aerospace (as well as some other areas of discrete manufacturing as a whole) that can have an impact on professional services include the increasingly complex connectivity between systems and equipment including robot devices, increased attention to means of monitoring and controlling quality. Other areas receiving increased attention include the linking of the design engineers with the manufacturing engineers and the implementation of flexible manufacturing systems.

Aerospace firms are under increasing pressure from declining government orders and an air transport market that has weaknesses as well as increasing foreign competition from aircraft manufacturers. Some aerospace firms may reduce their participation in certain areas of the markets.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
DEC	System Operations	Boeing	50.0
DEC	Network Integration	Aeronautical Radio	15.0
Andersen	Document Mgmt.	Boeing	7.5
McDonnell Douglas	Mfg. Facility	Douglas Aircraft	14.8
TSC	Mfg./Financial Software Engineering	Northrop Aircraft	Prop.
TSC	Factory Mgmt.	Northrop B-2 Group	Prop.
SAP America	RS/2 mainframe	Canadian Group Bombardier	5.0
CSC	System Operations	General Dynamics	2500.0

D
Electrical Machinery

1. Professional Services-Related Industry Issues

Issues shared with other industries include a high level of pressure to reduce costs and/or increase productivity; improve order processing as well as speed up transaction processing, integration of networks, integration of databases and applications and use of electronic information; increase attention to customer support/service and high use of customization; and meet needs for scarce EDP skills. In addition to EDI, electronic discrete manufacturing is beginning to experience an impact from the use of electronic information to supply data on materials and technology.

Issues in this manufacturing segment that can have an impact on professional services are similar to those in manufacturing generally and include the increasingly complex connectivity between systems and equipment including robot devices in manufacturing establishments, increased attention to means of monitoring and controlling quality and continuing attempts to monitor customer problems and purchasing activities. Other areas receiving increased attention include the linking of the design engineers with the manufacturing engineers and the implementation of flexible manufacturing systems. Market drivers include shortened product life, rapidly changing market demands, and the interest to enter niche markets.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
EDS	Electronics Manufacturing Systems	Signetics	100.0
Unitronix	Integrated manufacturing, distribution and financial system	Leica	1.9
ISSC	System Operations	United Technologies	80.0
TSC	Integrated Financial Sys.	ESCO Elect.	Prop.
TSC	MRP II	Wilcox	Prop.
TSC	Eng./Mfg. System	Westinghouse Elect.	Prop.

E
Construction

1. Professional Services-Related Industry Issues

Issues shared with other vertical markets include pressure to reduce costs and increase productivity; a desire to use LANs and client/server systems as well as open systems to a greater extent; a need to overcome shortages of high level IS personnel; and continuing needs to integrate networks, data bases and applications. There is also continuing interest in improving customer support and service and increasing the use of EDI in order to save costs as well as improve customer service.

Unique issues in construction include the greatly depressed construction market and the various attempts to find new types of construction activity including further work on developing assembly lines for construction modules. Improvements in automated estimating and methods of tracking and controlling costs have also been of recent interest in construction.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
AT&T	Network Computing	BE&K Construction	Prop.
SHL	Client/Server System Operations	Fluor Daniel	10.0

F
Process Manufacturing

1. Professional Services-Related Industry Issues

Issues that are shared with other industries include greater use of networks, the generation of increased amounts of information for the purpose of analyzing performance; integrating applications and data bases; meeting high levels of pressure to reduce costs; dealing with mergers and acquisitions and meeting shortages of high level IS personnel.

Unique issues in process manufacturing include activities to integrate more functions in process manufacturing through the use of LANs and client/server or other downsized solutions, to optimize plant performance through space, work flow and maintenance planning and to relocate, decentralize or recentralize operations to take advantage of reduced costs or other factors at smaller or different geographical locations.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Perot	CIM for textileplant	Springs Industry	26.0
EDS	System Operations	Westmoreland	Prop.
DEC	Mill Mfg. System	James River Corp.	Prop.
CSC	Reengineering of Division	Boise Cascade	17.0
Prop.	Revenue Cycle Sys.	Boise Cascade	13.0
Prop.	Employee Info Sys.	Boise Cascade	6.0
Prop.	System Interface	Georgia Pacific	15.0
CSC	System Operations	WCI Steel	64.0
EDS	System Operations	PPG	34.0
SAP America	Financial Accounting	Haarman & Reimer	Prop.

G

Consumer Goods

1. Professional Services-Related Industry Issues

Issues that are shared with other industries include greater use of networks including LANs, the generation of more information for the purpose of analyzing performance, integrating applications and data bases, high levels of pressure to reduce costs, dealing with mergers and acquisitions and shortages of high level IS personnel.

Unique issues in consumer process manufacturing include activities to optimize plant performance through space, work flow and maintenance planning and moves to relocate, decentralize or recentralize operations to take advantage of reduced costs or other factors at smaller or different geographical locations as well as increased emphasis on marketing information and systems.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
EDS	Upgrade of IS	Del Monte	1.5
Martin Marietta	Inventory management	Monarch Foods	20.0
CACI	Warehouse automation	Nestle	Prop.

H

Chemicals/Pharmaceutical

1. Professional Services-Related Industry Issues

Issues that are shared with other industries include greater concern with product profitability, greater use of application systems that integrate accounting and operations functions, the generation of more information for the purpose of analyzing performance, integrating applications and data bases, high levels of pressure to reduce costs; dealing with mergers and acquisitions, and shortages of high level IS personnel.

Unique issues in chemical/pharmaceutical process manufacturing include activities to optimize plant performance through space, work flow and maintenance planning and moves to relocate, decentralize or recentralize operations to take advantage of reduced costs or other factors at smaller or different geographical locations as well as increased emphasis on marketing information and systems.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
SHL	System Operations	McGaw Inc.	Prop.
IBM	Process Mgmt. System	Burroughs Wellcome	Prop.
TSC	Rail Fleet Network	Dow Chem.	Prop.
Andersen Consulting	System Operations	Revlon	10.0
SAP America	Custom Integrated Financial System	DuPont	5.0

I
Petroleum

1. Professional Services-Related Industry Issues

Issues that are shared with other industries include increased emphasis on the generation of information to analyze performance, integrating applications and data bases, high levels of pressure to reduce costs, dealing with mergers and acquisitions and shortages of high level IS personnel. Interest in increasing use of LANs and client/server applications which is found in this industry is also found in other vertical markets.

Unique issues in petroleum process manufacturing include activities to optimize plant performance through space, work flow and maintenance planning and moves to relocate operations to take advantage of reduced costs or other factors at systems to provide more information and services to customers.

Petroleum exploration requires the collection and analysis of large amounts of complex data which has promoted the use of new approaches to data reduction including the use of parallel computing architecture. Middle East events could result in companies having more investment resources available.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Andersen Consulting	System Operations	Sun Oil	175.0
Andersen Consulting	System Operations	Arco Oil	18.0
Bell Atlantic	EDI System	Crown Central Petro	Prop.
Andersen Consulting	System Operations	Phillips Petro	5.0
Power Computing	System Operations	Beacon Oil	Prop.
SAP America	Finacial/Materials Management System	Mobil	2.0
SAP America	Financial Accounting	Amoco	Prop.
SAP America	Integrated Application System	Imperial Chemical Industries PLC	Prop.

J

Rubber/Glass/Minerals

1. Professional Services-Related Industry Issues

The issues shared with other vertical markets include pressures to reduce costs and increase productivity as well as to use LANs and client server technology to a greater extent. There are also needs in common with other vertical markets to integrate networks, databases and applications in use and to overcome shortages of IS personnel with higher levels of skill.

Unique issues in this vertical market include the introduction of MRP II types of systems suited to this market and efforts to optimize plant performance to a greater extent. Efforts to deal with environmental factors and the transport of output to market in more economic manner are also among the unique issues.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
EDS	Work Scheduling	Cyprus Minerals	Prop.
Power Computing	Unspecified	Ocean Drilling & Exploration	Prop.
Power Computing	Financial	Santa Fe Mineral	Prop.
EDS	Client/Server/ Outsourcing	Freeport-McMoran	150.0

K

Communications

1. Professional Services-Related Industry Issues

Issues that are shared with other industries include dealing with new technology, shortages of IS personnel with high levels of skills, pressures for cost reduction and/or increased productivity, reacting to mergers and acquisitions, handling regulatory factors, meeting high levels of reporting requirements for government organizations, and paying increased attention to customer service/support.

Unique issues in communications that can have an impact on professional services include the interfaces and boundaries between services of different communication companies or between different types of services as well as the pricing of services. Other issues include large scale DBMS for directory assistance, voice response, and image processing. Also there are questions about assistance required in core transmission and switching parts of the business.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
U.S. West	ISDN Implementation	3M Net	30.0E
IBM	Data Center Conversion	GE/NBC	Prop.
Nesbit Systems	Integrate Systems and Communications	CBS	21.0
EDS	Bill Processing System	Advanced Telecomm	Prop.
EDS	Communication Sys.	Neodata	Prop.
EDS	Unspecified	Western Union	250.0
CSC	Reengineer Order Entry/Processing	AT&T Prop.	
CSC	Customer Service Automation	US Sprint	Prop.
AMS	Billing System	Alltel	Prop.
CGA	Maintenance System Replacement	Bell Atlantic	4.0

L
Computer Services

1. Professional Services-Related Industry Issues

Issues that are shared with other industries include needs to increase productivity and service as well as speed up transaction processing and response time (professional service firms are aiding software and hardware firms to achieve this goal), shortages of higher level IS people, pressures for cost reduction and/or increased productivity, dealing with mergers and acquisitions, increased attention to customer service/support, and continuing needs for customization.

Unique issues in computer services that can have an impact on professional services include the need to develop a response to the growth of downsizing, client/ server applications and outsourcing as well as to constantly provide added value services to keep clients from migrating to alternate solutions and the requirement to upgrade solutions to perform with new operating systems, other system software releases and new hardware technology.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Wicat	Development of CBT Tools	Delex Systems	0.9
Data General	Network Maintenance	Epic Systems	10.0
Comtex	PC/Electronic Mail	ADP	Prop.
Prop.	Communication System	Ashton Tate	2.3
Prop.	Internal System	Legent	7.0
SHL	Desktop Mgmt.	Fluor Daniel	Prop.
McKinsey & Co.	Order Entry Reengineering	Technicon	3.0
Litton	Financial System	Quotron Sys.	135.0

M

Consultants

1. Professional Services-Related Industry Issues

Issues that are shared with other industries include staying aware of the impact of new technology, handling shortages of higher level IS people, meeting pressures for cost reduction and/or increased productivity, dealing with mergers and acquisitions, and providing attention to customer service/support.

Unique issues in consulting that can have an impact on professional services include the continuing need to improve office automation and communication services that will facilitate consulting work and an ongoing need to obtain education in advances in IS technology.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
PRC Inc.	Tech support to contract with nuclear plant	Ebasco Services	30.0
Avis Information Systems	Client/server technology	Thompson & Mitchell	3.0
Cortex	CASE methodology	Price Waterhouse	Prop.
Novell/Palindrome	LAN office automation	Johnson & Gibbs	Prop.
Asset Group	VINES Network	Heller,Ehrman,White & MacCauliffe	Prop.
SUN Microsystems	Network	Avis Info Sys.	5.0

N

Health

1. Professional Services-Related Industry Issues

Issues shared with other verticals include needs for improved cost and charge tracking and improvement in billing and cost reduction. Other shared issues include integrating data bases and applications, expanding network and client/server capabilities, handling merger and consolidation

as well as downsized facilities and meeting high levels of demand for reporting by the government and increased demand for customer services/ support.

Unique issues in health which can have an impact on professional services are the need to find more economically viable methods of supplying patient care and increased dependence on information services vendors including software product vendors, systems integrators, processing firms and systems operations companies, which will expand their influence in 1992. Other unique issues include the relations between health organizations and government or academic organizations which often require new reporting and changes in information systems. The integrated approach to patient care, which is also a unique issue, is becoming a a necessity at many large healthcare facilities where all patient information is held in the central data bases along with diagnostic information to assist the medical staff.

Reorganization of hospitals, including the establishment of subsidiary or affiliated offices that handle processing, has had an impact on the systems operations market for information service vendors, delaying their use at hospitals and other health organizations.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
PRC Inc.	Integrate applications	Brooklyn VA Medical Center	32.7
Andersen Consulting	Clinical and financial systems	Voluntary Hospitals of America	50.0
Medicus Systems	Administrative Services Outsourcing	San Diego County	Prop.
SMS	Administrative/ Financial Outsourcing	Multiple Hospitals	Prop.
Perot	Info. System	TX Children's Hospital	Prop.
ERI	Desktop Ops.	Bridgeport Hospital	Prop.
Data General	Unspecified	EPIC Healthcare	Prop.
ACS	Unspecified	Takecare	1.2

O
Higher Education

1. Professional Services-Related Industry Issues

A major issue that is shared with other verticals is a need to reduce operating expenses even if it means reducing services. Other shared issues include major plans or needs to expand, upgrade and/or integrate networks and applications/databases, dealing with shortages of higher level IS expertise, and meeting high levels of reporting required by government organizations.

Unique issues in higher education that can have an impact on professional services include the need to improve systems that administer and track fund raising and monitor student loan accounting and repayment. Other unique issues include participation in regional network and other shared IS projects, and interest in improving systems that manage physical assets and development projects.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Prop.	Financial Aid Sys.	Univ. of Idaho	Prop.
Prop.	Student Info Sys.	East Texas State	Prop.
SCT	System Operations	G.Washington U.	42.0
IBM/DEC	Unix Network	MIT	100.0
Prop.	Telecomm Network	Pace, LIU, NYU Consortium	Prop.
SCT	Telecom operations, academic, admin. computing	Norwich Univ./ Florida Institute of Technology	17.0

P

Media

1. Professional Services-Related Industry Issues

Issues shared with other verticals include pressures to administer, track and plan strategies for reducing debt, achieving cost reduction and/or increased productivity, dealing with mergers and acquisitions, and handling high levels of reporting to government organizations. Other unique issues include considering and developing multi media products and services and developing new approaches for customer service.

Unique issues in media that can have an impact on professional services include the increasing need for sophistication in marketing and list management systems and continuing interest in upgrading telemarketing systems.

Text processing and publishing systems are being downsized onto smaller and more standard platforms.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
EDS	Cable TV Admin.	Various small/med. companies	Prop.
C&L/Nynex	Multi-media Repository	Christian Science Pub.	Prop.
Computer Horizons	Financial SysUpgrade	Time Warner	Prop.
Perot	Add on System	McGraw-Hill	Prop.
SAP America	Financial/cost accounting	Polygram Records	Prop.

Q

Schools

1. Professional Services-Related Industry Issues

Among the issues that are shared with other verticals include increasing interest in LANs and client/server applications as well as pressures to integrate applications and databases, achieve cost reduction and increase productivity. High levels of reporting to government organizations is also an issue shared with other verticals.

Unique issues in schools that can have an impact on professional services include further automation of administration and educational support and pressures to upgrade information technology in use.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Wicat	Integrated Learning System	Pulaski County, VA	0.9
Wicat	Unspecified	Nebraska	Prop.
Wicat	ILS	Utah Districts	1.1
Wicat	ILS	Nassau BOCES	0.4

R

State/Local Government

1. Professional Services-Related Industry Issues

Issues shared with other verticals include increased use and planning for LANs and client/server technology, planning for cost reduction and increased productivity, expansion and integration of networks, further integration of databases and applications, and dealing with shortages of IS personnel with higher levels of skills.

Unique issues in state & local government that can have an impact on the use of professional services include the reduction of federal funds and the long decision cycles that are involved in many government awards and projects.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Cincinnati Bell	Imaging Birth, Death Records	Virginia	2.0
Oracle	Imaging for Motor Vehicles	Ohio	3.0
Motorola	Office Automation/ Integration	Tennessee	55.0

Vendor(s)	*Project*	*Customer*	*Value ($M)*
CSC	Claims Processing	NY Dept. of Social Services	149.0
EDS	Parking Violations	City of Chicago	40.0
Andersen	System Operations	Texas Utilities	15.0

S

Transportation

1. Professional Services-Related Industry Issues

Issues that are shared with other verticals include planning for cost reduction and increased productivity, dealing with mergers and acquisitions, staying abreast of regulatory factors, meeting high levels of reporting to government organizations, and overcoming shortages of IS personnel with high levels of skill. Another shared issue involves the increased attention that has to be paid in many vertical markets to customer service and support.

Unique issues in transportation that can have an impact on professional services include the need to be able to restructure and change services and pricing rapidly to meet the needs of transportation customers and travelers, the increasing need to supply or interface to international transportation, and the need for highly specialized programming to upgrade reservation systems.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
DEC	Production Mngment System	Nisson	7.0
DEC	Aircraft Maintenance	Delta Airlines	4.6
Andersen	Systems Ops	Pan Am	20.0
Unisys	Passenger Service, POS - travel agent support	Japan Air Lines	70.0
Litton	Material Handling	American Airlines	17.0
SAIC/DEC	Shipping Network	Baltic & Internat'l	100.0
EDS	Sys Ops	Continental	2,100.0

T
Utilities

1. Professional Services-Related Industry Issues

Issues that are shared with other verticals include rising interest in the use of LANs, pressure for cost reduction and increased productivity (which is reflected in the interest in automatic meter reading and automated mapping), and the need to deal with regulatory factors and required government reporting. The continuing pressure to improve customer service and support is another issue shared with many vertical markets.

Among the unique issues in utilities that can have an impact on professional services are pressures to upgrade plants (and associated systems) to maintain high utilization rates, the need to replace older technology (particularly for nuclear installations) and continuing concern about systems involved with safety in relation to nuclear as well as other facilities. The issue of future use of nuclear technology is also one of more concern to the utility market.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
Ebasco	Nuclear plant support system	Watts Bar Plant	Prop.
CSC	Customer Info Sys	Gas & Electric Utility	Prop.
Andersen Consult.	Sys Ops	Atlanta Gas & Electric	15.0
Andersen	Sys Ops	Brooklyn Union Gas	40.0
SAP America	Inventory/Purchasing/ Accounting System	Cincinnati Gas and Electric	Prop.
CSC	Water/Sewage system	Mass. Dept. of Water Resources	16.0

U

Wholesale Distribution

1. Professional Services-Related Industry Issues

Issues that are shared with other vertical markets include increased attention to customer service/support, pressures for cost reduction and/or increased productivity, pressures to speed up transaction processing, the need to integrate databases and applications, and the challenge of overcoming shortages of IS personnel with higher levels of skill. The expansion of networks and increasing use of electronic information (EDI) are also issues shared with many other markets.

Unique issues in wholesale that can have an impact on professional services include rising interest in measuring the financial effect of warehouse logistics and the impact of Just-In-Time in manufacturing. The use of new technology in a group of areas for POS, bar code, material handling and warehouse automation, is an issue that is of more concern in wholesale distribution. Unique types of services are also being added by wholesalers to meet customer needs.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
DEC	Inventory Mgmnt	Kaman	Prop.
Business Tech. Group	Warehouse Mgmnt	Exel Logistics Distribution Centers	Prop.
SHL Systemhouse	Financial Info Sys	Epic Healthcare	12.0
AT&T/IBM	LAN to WAN NET	Crucible Service Centers	Prop.
UIS	Order Entry	Ace Distributors	2.0
DEC	Admin. System Custom	National Distribution	.1

V
Retail Distribution

1. Professional Services-Related Industry Issues

Among the issues that are shared with other vertical markets include pressures for cost reduction and/or increased productivity, dealing with mergers and acquisitions and accompanying debt loads, and providing increased customer service/support. Needs to meet shortages of higher level IS people, expand and integrate networks, integrate applications and databases and utilize EDI are also shared with other vertical markets.

Unique issues in retail distribution that can have an impact on professional services include the increasing use of POS and check authorization, further diversification of products and services to meet customer demands, and new concepts in retail including shopping at home, electric couponing and more collection of data on shopping habits of customers, all of which can require changes to existing application systems.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
DEC	Merchandising System	Toys R Us	16.5
DEC	Merchandising	CVS Pharmacies	16.5
DEC	Merchandising	Victoria's Secret	16.5
Litton	Material Handling	Sears	6.0
ISSC	Pharmacy System	Walmart	9.0
ISSC	Systems Ops.	Zales	200.0
ISSC	Systems Ops	Supermarkets General	300.0
TSC	Order fulfillment	Bear Creek Ops	20.0
ISSC	Systems Ops	Cullum Cos.	Prop.
TSC	OE/Process/ Fulfillment	Michigan Bulb.	Prop.
TSC	Direct 2000	Shaklee	Prop.
EDS	Distributed Processing/ Outsourcing	Smith Food & Drug Centers	160.0

W
Finance

1. Professional Services-Related Industry Issues

One of the major issues shared with other vertical markets is interest in LANs and client server application systems. Among the other issues shared with other vertical markets include pressures for cost reduction and/or increased productivity, the need to speed up transaction processing, plans to expand and integrate networks as well as integrate databases and applications, the pressure to overcome shortages of higher level IS people, and plans to increase use of EDI. This market has also had to deal with the issues of mergers and acquisitions, regulatory factors and government reporting, and increased demand for customer service/support just as a number of other markets have.

The unique issues in finance that can have an impact on professional services include the globalization of financial markets, restructuring of the industry, and change in products/services that is taking place as a result of regulatory change and economic performance of sectors of the market. Other unique issues include the high level of use of vendor processing and systems operations services (outsourcing) as well as increasing interest in generating fee-based income through the further development of card, mortgage, and investment handling services.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
IBM	Asset Tracking/process	Resolution Trust	24.2
MCI	Global Communications	VISA	87.0
IBM	Outsourcing	First Boston	900.0
IBM	Develop and Operation	SE Banking	Prop.
EDS	Systems Ops	Signet Bank	137.0
Perot	Systems Ops	NCNB	200.0
Andersen	Systems Ops	IPPA Bank	120.0
MCI	Message/voice Network	American Express	100.0
Andersen	Credit Card Processing	BancOne Corp.	45.0

Vendor(s)	*Project*	*Customer*	*Value ($M)*
GTE Vantage Solutions	Imaging and Multimedia	Barnett Banks	Prop.
EDS	Sys Ops	Continental Bank	700.0
Unisys	Banking Ops	Dearborn Federal	3.0
Perot	Systems Ops	First American Bankshares	400.0
ISSC	Systems Ops	First City Bancorp	600.0
Booz Allen	International Banking	Chase	2.0
McKinsey	Loan Funding/Risk Management	Chemical	3.0
A T Kearney	Consolidation Planning	Chemical	2.0

X
Insurance

1. Professional Services-Related Industry Issues

Among the issues that are shared with other vertical markets are the pressures for cost reduction and increased productivity, above average shortages of higher level IS personnel, need for government reporting, and increased attention to customer service/support.

Unique issues in insurance include the financial weakness of certain insurance companies which has been leading to increased use of outsourcing and the need to provide more timely and accurate information to independent and captive agents. This sector is one of the prime candidates for image processing applications, given the historic reliance on paper.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
McDonnell Douglas	Integrated billing	Transamerica	Prop.
Power Computing	Outsource Computer Operation	Epic Healthcare	12.0
Perot	Outsourcing	ICH	100.0
Unisys	Imaging	Blue Cross/ Blue Shield	Prop.
EDS	Sys Ops	BC/BS 800.0	
McDonnel Douglas	Claims Processing	Gallagher Bassett (Third party admin.)	2.0
CSC	Claims processing	New York Medicaid	150.0
CSC	Custom policy admin.	North American Life	Prop.
Cigna Information	Complete Policy & claims Administration	New Jersey Citizens Reciprocal Exchange	2.0
ISI Systems	Assigned risk outsourcing	Worldwide Insurance	Prop.
ISSC	Insurance processing outsourcing	Foremost Co.	450.0

Y

Securities

1. Professional Services-Related Industry Issues

Issues shared with other verticals include pressures to accommodate increased volume and speed up transaction processing as well as to reduce costs where possible and increase productivity. There are also pressures to integrate networks, databases and applications and improve customer service/support. The use of LANs and client/server systems has also met with enthusiasm in the securities market as in other vertical markets.

Among the unique issues in securities that can impact professional services include the development/support of new products, global trading, and the increasing complexity of trading and support functions.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
MCI	Nationwide Data Network	NASDAQ	10.0
Digital Equipment	Capital markets trading	Prudential Securities	Prop.
BT NA	Telecom Systems Ops	J. P. Morgan & Co.	Prop.
IBM	Network Management	Merrill Lynch	Prop.
TSC	Office System Paine	Webber	Prop.

Z

Federal Government

1. Professional Services-Related Industry Issues

Among issues that are shared with other verticals include the need to accommodate reductions in organization and staff as well as to achieve further cost reduction and improvements in productivity. Other shared issues include the need to integrate networks, overcome shortages of IS personnel with higher levels of IS knowledge, increase use of electronic information (EDI and electronic part information in the defense industry - e.g. P-DES), and continuing needs for customization of software packages.

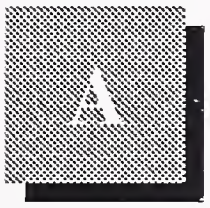
Unique issues in the federal government that can have an impact on professional services include improving the information supplied to executive and legislative offices, changes in contracting for services as reflected in Competition in Contract Act (CICA), and continuing interests in achieving software standards.

The most significant unique issue in the federal government market is the ongoing reduction in expenditures for defense that has led to lower planned expenditures for professional services.

2. Exemplary Contracts

Vendor(s)	*Project*	*Customer*	*Value ($M)*
IBM	Integrated Collection System	IRS	105.0
McDonnell Douglas	Automated Message	US Air Force	40.0
PRC	Image Processing System	U.S. Patent Office	166.0
PRC	Mail Tracing System	US Postal Service	270.0
PRC	Software Engineering	GSA	67.0
Sun	Ada Software Implement.	U.S. Air Force	48.0
Grumman	Oceanic Model	Naval Oceanographic	204.0
IBM	Collection System	IRS	340.0
TRW	Tax Modernization Plan	IRS	300.0
Lockheed	Office Automation	Veteran Affairs	153.0
PRC	Patient Care System	Veteran Affairs	32.7
SHL	Mail Tracking Sys.	U.S.Postal Service	270.0
CDC	Network Integration	US Army Corps of Eng.	365.0
Boeing	Integrated Info Sys.	US Army	1600.0
CSC	Comm. Network	State Dept.	48.0
IBM/Andersen	Property Mgmt.	Resolution Trust	24.0

Appendixes



INPUT Forecast with Inflation by Industry Mode

TABLE A

INPUT FORECAST WITH INFLATION
BY INDUSTRY MODE

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	CAGR 91-96
DISCRETE MANUFACTURING									
PROFESSIONAL SERVICES	4163	4459	4842	5255	5702	6184	6705	7308	9%
CONSULTING	980	1065	1232	1405	1602	1821	2068	2362	14%
SOFTWARE DEVELOPMENT	2592	2734	2864	3012	3171	3321	3482	3655	5%
EDUCATION/TRAINING	591	660	746	838	929	1042	1155	1292	12%
SYSTEMS OPERATIONS (PLATFM)	227	268	321	373	425	476	533	612	15%
SYSTEMS OPERATIONS (APPLIC)	259	306	367	455	564	699	867	1068	23%
SYSTEMS INTEGRATION	264	318	394	488	595	715	852	1038	22%
SOFTWARE DEVELOPMENT	142	172	212	264	319	385	457	556	22%
DESIGN/INTEGRATION	49	59	73	91	111	133	159	194	22%
PROJECT MGMT/CONSULTING	48	58	72	89	109	131	156	190	22%
EDUCATION/TRAINING	12	14	18	21	27	32	39	48	23%
OPERATIONS/MAINTENANCE	13	15	19	23	29	34	41	50	22%
TOTAL	4913	5351	5924	6571	7286	8074	8957	10025	11%
PROCESS MANUFACTURING									
PROFESSIONAL SERVICES	1977	2119	2324	2546	2788	3050	3336	3668	10%
CONSULTING	461	510	591	678	773	882	1008	1155	15%
SOFTWARE DEVELOPMENT	1250	1310	1386	1474	1568	1589	1760	1867	6%
EDUCATION/TRAINING	266	299	347	394	447	579	568	646	14%
SYSTEMS OPERATIONS (PLATFM)	176	208	249	289	330	369	413	474	15%
SYSTEMS OPERATIONS (APPLIC)	219	258	310	385	477	591	733	903	23%
SYSTEMS INTEGRATION	71	80	90	106	127	152	184	217	18%
SOFTWARE DEVELOPMENT	40	44	51	60	71	85	104	124	19%
DESIGN/INTEGRATION	11	12	14	16	20	23	28	33	18%
PROJECT MGMT/CONSULTING	12	14	15	18	22	26	32	38	18%
EDUCATION/TRAINING	4	5	5	6	7	9	10	11	15%
OPERATIONS/MAINTENANCE	4	5	5	6	7	9	10	11	15%
TOTAL	2443	2665	2973	3326	3722	4162	4666	5262	12%

TABLE A

INPUT FORECAST WITH INFLATION
BY INDUSTRY MODE

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	CAGR 91-96
TRANSPORTATION									
PROFESSIONAL SERVICES	213	233	250	269	309	310	333	358	7%
CONSULTING	49	55	61	67	74	81	88	97	10%
SOFTWARE DEVELOPMENT	135	146	154	163	193	184	196	208	6%
EDUCATION/TRAINING	29	32	35	39	42	45	49	53	9%
SYSTEMS OPERATIONS (PLATFM)	91	108	132	164	193	224	260	310	19%
SYSTEMS OPERATIONS (APPLIC)	33	40	49	62	76	94	117	145	24%
SYSTEMS INTEGRATION	79	89	103	123	150	181	222	267	20%
SOFTWARE DEVELOPMENT	43	49	57	67	83	99	123	148	20%
DESIGN/INTEGRATION	13	15	17	21	25	31	38	46	20%
PROJECT MGMT/CONSULTING	16	18	21	25	30	37	44	53	20%
EDUCATION/TRAINING	4	4	5	6	7	8	10	12	20%
OPERATIONS/MAINTENANCE	3	3	3	4	5	6	7	8	18%
TOTAL	416	470	534	618	728	809	932	1079	15%
UTILITIES									
PROFESSIONAL SERVICES	233	249	268	288	309	333	359	386	8%
CONSULTING	74	82	89	97	105	114	124	135	9%
SOFTWARE DEVELOPMENT	106	109	116	124	133	142	151	161	7%
EDUCATION/TRAINING	53	58	63	67	71	77	84	90	8%
SYSTEMS OPERATIONS (PLATFM)	17	19	22	25	28	30	34	38	12%
SYSTEMS OPERATIONS (APPLIC)	8	9	10	13	15	17	21	25	18%
SYSTEMS INTEGRATION	235	256	286	329	371	410	457	513	12%
SOFTWARE DEVELOPMENT	132	143	160	184	208	229	255	286	12%
DESIGN/INTEGRATION	34	37	41	47	53	59	66	74	12%
PROJECT MGMT/CONSULTING	47	53	59	68	76	84	94	105	12%
EDUCATION/TRAINING	13	14	16	18	21	23	25	28	12%
OPERATIONS/MAINTENANCE	9	9	10	12	13	15	17	19	14%
TOTAL	493	533	586	655	723	790	871	963	10%

TABLE A

INPUT FORECAST WITH INFLATION
BY INDUSTRY MODE

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	CAGR 91-96
TELECOMMUNICATIONS									
PROFESSIONAL SERVICES	950	1098	1265	1457	1678	1932	2226	2571	15%
CONSULTING	227	265	273	323	383	451	533	613	15%
SOFTWARE DEVELOPMENT	599	685	819	924	1044	1173	1321	1511	14%
EDUCATION/TRAINING	124	148	173	210	251	308	372	447	20%
SYSTEMS OPERATIONS (PLATFM)	26	30	34	39	45	50	57	65	14%
SYSTEMS OPERATIONS (APPLIC)	38	44	50	63	81	97	118	144	22%
SYSTEMS INTEGRATION	112	125	143	173	208	252	301	359	19%
SOFTWARE DEVELOPMENT	62	70	80	97	117	140	169	202	19%
DESIGN/INTEGRATION	18	20	24	28	34	41	50	60	20%
PROJECT MGMT/CONSULTING	22	24	27	33	40	49	57	68	19%
EDUCATION/TRAINING	5	5	6	7	8	10	12	14	19%
OPERATIONS/MAINTENANCE	5	6	6	8	9	12	13	15	17%
TOTAL	1126	1297	1492	1732	2012	2331	2702	3139	16%
RETAIL DISTRIBUTION									
PROFESSIONAL SERVICES	207	220	232	246	261	276	292	309	6%
CONSULTING	49	53	57	61	66	72	78	84	8%
SOFTWARE DEVELOPMENT	130	137	143	151	159	165	172	180	5%
EDUCATION/TRAINING	28	30	32	34	36	39	42	45	7%
SYSTEMS OPERATIONS (PLATFM)	82	98	122	149	183	216	253	306	21%
SYSTEMS OPERATIONS (APPLIC)	68	84	105	136	177	230	299	385	29%
SYSTEMS INTEGRATION	116	142	167	198	242	300	366	442	21%
SOFTWARE DEVELOPMENT	59	73	86	101	124	153	187	226	21%
DESIGN/INTEGRATION	23	28	33	39	48	60	72	87	21%
PROJECT MGMT/CONSULTING	22	27	32	38	46	57	72	88	22%
EDUCATION/TRAINING	6	7	8	10	12	15	17	20	19%
OPERATIONS/MAINTENANCE	6	7	8	10	12	15	18	22	21%
TOTAL	473	544	626	729	863	1022	1210	1443	17%

TABLE A

INPUT FORECAST WITH INFLATION
BY INDUSTRY MODE

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	CAGR 91-96
WHOLESALE DISTRIBUTION									
PROFESSIONAL SERVICES	327	351	371	393	416	440	465	492	6%
CONSULTING	76	83	89	96	103	112	121	130	8%
SOFTWARE DEVELOPMENT	208	221	232	243	254	266	279	292	5%
EDUCATION/TRAINING	43	47	50	54	59	62	65	69	7%
SYSTEMS OPERATIONS (PLATFM)	40	48	57	66	77	88	99	114	16%
SYSTEMS OPERATIONS (APPLIC)	26	31	37	45	54	66	82	100	21%
SYSTEMS INTEGRATION	74	86	99	117	136	157	182	211	16%
SOFTWARE DEVELOPMENT	40	46	53	63	74	85	100	117	17%
DESIGN/INTEGRATION	14	16	18	22	25	29	33	38	16%
PROJECT MGMT/CONSULTING	14	16	18	22	25	29	32	37	15%
EDUCATION/TRAINING	3	4	5	5	6	7	8	9	15%
OPERATIONS/MAINTENANCE	3	4	5	5	6	7	9	11	18%
TOTAL	467	516	564	621	683	751	828	918	10%
BANKING AND FINANCE									
PROFESSIONAL SERVICES	2040	2184	2311	2443	2585	2729	2880	3049	6%
CONSULTING	472	525	579	631	686	744	806	878	9%
SOFTWARE DEVELOPMENT	1296	1360	1406	1459	1514	1565	1619	1676	4%
EDUCATION/TRAINING	272	299	326	353	385	420	455	495	9%
SYSTEMS OPERATIONS (PLATFM)	640	723	832	940	1043	1158	1285	1442	12%
SYSTEMS OPERATIONS (APPLIC)	1121	1323	1587	1921	2324	2812	3374	4069	21%
SYSTEMS INTEGRATION	181	206	240	279	332	407	521	627	20%
SOFTWARE DEVELOPMENT	91	102	120	139	167	204	262	316	21%
DESIGN/INTEGRATION	36	41	48	56	67	82	105	127	21%
PROJECT MGMT/CONSULTING	35	41	47	55	65	81	104	125	20%
EDUCATION/TRAINING	9	11	12	14	16	19	24	28	17%
OPERATIONS/MAINTENANCE	10	11	13	15	17	21	26	31	19%
TOTAL	3982	4436	4970	5583	6284	7106	8060	9187	13%

TABLE A

INPUT FORECAST WITH INFLATION
BY INDUSTRY MODE

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	CAGR 91-96
INSURANCE									
PROFESSIONAL SERVICES	1434	1532	1662	1804	1957	2123	2305	2511	9%
CONSULTING	334	363	416	470	531	598	673	761	13%
SOFTWARE DEVELOPMENT	906	959	1009	1064	1123	1179	1240	1305	5%
EDUCATION/TRAINING	194	210	237	270	303	346	392	444	13%
SYSTEMS OPERATIONS (PLATFM)	359	416	479	551	611	666	726	812	12%
SYSTEMS OPERATIONS (APPLIC)	419	486	558	676	805	966	1159	1379	19%
SYSTEMS INTEGRATION	132	149	170	197	227	278	342	404	18%
SOFTWARE DEVELOPMENT	67	75	85	99	115	139	164	192	17%
DESIGN/INTEGRATION	28	32	36	42	48	59	75	89	19%
PROJECT MGMT/CONSULTING	25	28	33	38	44	54	73	88	21%
EDUCATION/TRAINING	6	7	8	9	10	13	15	17	16%
OPERATIONS/MAINTENANCE	6	7	8	9	10	13	15	17	16%
TOTAL	2344	2583	2869	3228	3600	4033	4532	5106	12%
MEDICAL									
PROFESSIONAL SERVICES	254	272	295	320	347	381	411	447	9%
CONSULTING	60	66	74	83	93	104	117	131	12%
SOFTWARE DEVELOPMENT	160	168	180	192	203	220	233	249	7%
EDUCATION/TRAINING	34	38	41	45	51	57	61	67	10%
SYSTEMS OPERATIONS (PLATFM)	405	466	536	611	690	766	850	959	13%
SYSTEMS OPERATIONS (APPLIC)	348	400	488	601	739	916	1136	1400	23%
SYSTEMS INTEGRATION	114	126	141	158	173	191	214	237	11%
SOFTWARE DEVELOPMENT	62	68	77	86	94	104	119	132	11%
DESIGN/INTEGRATION	19	21	23	26	28	31	34	37	10%
PROJECT MGMT/CONSULTING	21	23	27	30	33	36	39	43	11%
EDUCATION/TRAINING	6	7	7	8	9	10	11	12	9%
OPERATIONS/MAINTENANCE	6	7	7	8	9	10	11	12	9%
TOTAL	1121	1264	1460	1690	1949	2254	2611	3042	16%

TABLE A

INPUT FORECAST WITH INFLATION
BY INDUSTRY MODE

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	CAGR 91-96
EDUCATION									
PROFESSIONAL SERVICES	76	82	89	98	108	117	128	140	9%
CONSULTING	18	20	22	25	29	32	37	42	13%
SOFTWARE DEVELOPMENT	48	51	54	58	63	68	73	78	7%
EDUCATION/TRAINING	10	11	13	15	16	17	18	20	10%
SYSTEMS OPERATIONS (PLATFM)	54	61	70	78	87	97	108	121	12%
SYSTEMS OPERATIONS (APPLIC)	19	22	25	29	33	39	47	55	16%
SYSTEMS INTEGRATION	45	51	59	68	78	93	112	131	17%
SOFTWARE DEVELOPMENT	24	28	32	37	43	51	61	71	17%
DESIGN/INTEGRATION	9	9	11	13	15	18	22	26	20%
PROJECT MGMT/CONSULTING	8	9	10	12	14	16	21	25	18%
EDUCATION/TRAINING	2	2	3	3	3	4	4	5	15%
OPERATIONS/MAINTENANCE	2	3	3	3	3	4	4	4	6%
TOTAL	194	216	243	273	306	346	395	447	13%
BUSINESS SERVICES									
PROFESSIONAL SERVICES	281	304	323	345	367	391	417	445	7%
CONSULTING	65	75	83	91	100	110	121	133	10%
SOFTWARE DEVELOPMENT	180	185	194	204	214	224	234	245	5%
EDUCATION/TRAINING	36	44	46	50	53	57	62	66	7%
SYSTEMS OPERATIONS (PLATFM)	31	37	45	54	65	77	89	106	19%
SYSTEMS OPERATIONS (APPLIC)	49	60	74	90	112	139	172	212	23%
SYSTEMS INTEGRATION	73	87	108	135	177	205	252	312	24%
SOFTWARE DEVELOPMENT	35	42	52	65	85	98	121	150	24%
DESIGN/INTEGRATION	16	20	24	30	39	46	57	70	23%
PROJECT MGMT/CONSULTING	16	19	24	30	39	45	56	70	24%
EDUCATION/TRAINING	3	3	4	5	7	8	9	11	25%
OPERATIONS/MAINTENANCE	3	3	4	5	7	8	9	11	25%
TOTAL	434	488	550	624	721	812	930	1075	14%

TABLE A

INPUT FORECAST WITH INFLATION
BY INDUSTRY MODE

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	CAGR 91-96
FEDERAL GOVERNMENT									
PROFESSIONAL SERVICES	2136	1900	2038	2187	2345	2517	2700	2912	7%
CONSULTING	458	409	430	452	476	501	527	554	5%
SOFTWARE DEVELOPMENT	1256	1120	1238	1366	1508	1668	1839	2031	10%
EDUCATION/TRAINING	422	371	370	369	361	348	334	327	-2%
SYSTEMS OPERATIONS (PLATFM)	607	662	721	786	857	934	1018	1109	9%
SYSTEMS OPERATIONS (APPLIC)	939	1024	1116	1216	1325	1445	1575	1717	9%
SYSTEMS INTEGRATION	1303	1395	1645	1899	2229	2515	2897	3353	16%
SOFTWARE DEVELOPMENT	678	725	855	987	1159	1308	1506	1743	16%
DESIGN/INTEGRATION	222	237	280	323	379	428	492	569	16%
PROJECT MGMT/CONSULTING	312	335	395	456	535	604	695	804	16%
EDUCATION/TRAINING	39	42	49	57	67	75	88	102	16%
OPERATIONS/MAINTENANCE	52	56	66	76	89	100	116	134	16%
TOTAL	4985	4981	5520	6088	6756	7411	8190	9091	10%
STATE & LOCAL GOVERNMENT									
PROFESSIONAL SERVICES	2362	2638	3017	3451	3948	4516	5167	5922	14%
CONSULTING	553	635	764	907	1074	1272	1503	1786	19%
SOFTWARE DEVELOPMENT	1469	1616	1804	2021	2249	2531	2854	3198	12%
EDUCATION/TRAINING	340	387	449	523	625	713	810	939	16%
SYSTEMS OPERATIONS (PLATFM)	353	399	471	546	617	685	760	865	14%
SYSTEMS OPERATIONS (APPLIC)	568	653	771	925	1110	1332	1598	1911	20%
SYSTEMS INTEGRATION	294	339	405	496	595	716	871	1052	21%
SOFTWARE DEVELOPMENT	159	183	219	268	319	385	470	568	21%
DESIGN/INTEGRATION	45	52	62	77	94	112	136	165	21%
PROJECT MGMT/CONSULTING	67	76	92	112	135	163	197	238	21%
EDUCATION/TRAINING	13	17	19	23	28	33	40	47	19%
OPERATIONS/MAINTENANCE	10	11	13	16	19	23	28	34	21%
TOTAL	3577	4029	4664	5418	6270	7249	8396	9750	16%

TABLE A

INPUT FORECAST WITH INFLATION
BY INDUSTRY MODE

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	CAGR 91-96
MISCELLANEOUS INDUSTRIES									
PROFESSIONAL SERVICES	108	116	125	134	143	155	168	181	8%
CONSULTING	25	28	30	33	37	40	44	48	9%
SOFTWARE DEVELOPMENT	67	71	76	81	85	91	97	103	6%
EDUCATION/TRAINING	16	17	19	20	21	24	27	30	10%
SYSTEMS OPERATIONS (PLATFM)	6	7	8	9	10	11	12	13	11%
SYSTEMS OPERATIONS (APPLIC)	9	10	12	14	16	19	23	27	18%
SYSTEMS INTEGRATION	3	3	3	4	4	6	7	8	18%
SOFTWARE DEVELOPMENT	1.5	1.5	1.5	2	2	3	4	5	18%
DESIGN/INTEGRATION	0.6	0.6	0.6	1	1	1	1	1	17%
PROJECT MGMT/CONSULTING	0.9	0.9	0.9	1	1	2	2	2	17%
EDUCATION/TRAINING	*	*	*	*	*	*	*	*	
OPERATIONS/MAINTENANCE	*	*	*	*	*	*	*	*	
TOTAL	126	136	148	161	173	191	210	230	9%
GRAND TOTAL									
PROFESSIONAL SERVICES	16761	17757	19412	21236	23263	25454	27892	30701	9%
CONSULTING	3901	4234	4790	5419	6132	6934	7848	8910	13%
SOFTWARE DEVELOPMENT	10402	10872	11675	12536	13481	14386	15550	16760	7%
EDUCATION/TRAINING	2458	2651	2947	3281	3650	4134	4494	5031	11%
SYSTEMS OPERATIONS (PLATFM)	3114	3550	4099	4680	5261	5847	6497	7345	13%
SYSTEMS OPERATIONS (APPLIC)	4123	4750	5559	6631	7908	9462	11321	13539	19%
SYSTEMS INTEGRATION	3096	3452	4053	4770	5644	6578	7780	9172	18%
SOFTWARE DEVELOPMENT	1636	1822	2141	2519	2980	3468	4102	4834	18%
DESIGN/INTEGRATION	538	600	705	832	987	1153	1368	1617	18%
PROJECT MGMT/CONSULTING	666	742	873	1027	1214	1414	1674	1974	18%
EDUCATION/TRAINING	125	142	165	192	228	266	312	366	17%
OPERATIONS/MAINTENANCE	132	147	170	200	235	277	324	380	17%
TOTAL	27094	29509	33123	37317	42076	47341	53490	60757	13%

TABLE B

IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
MANUFACTURING									
PROFESSIONAL SERVICES	1757	1876	2026	2179	2353	2550	2773	3025	8%
CONSULTING	414	448	515	583	661	751	855	977	14%
SOFTWARE DEVELOPMENT	1094	1150	1198	1249	1309	1369	1440	1513	5%
EDUCATION/TRAINING	249	278	312	348	383	430	478	535	11%
SYSTEMS OPERATIONS - TOTAL	205	242	288	343	408	484	579	695	19%
PLATFORM OPERATIONS	96	113	134	155	175	196	220	253	14%
APPLICATION OPERATIONS	109	129	154	189	233	288	359	442	23%
SYSTEMS INTEGRATION	111	134	165	202	246	295	352	430	21%
SOFTWARE DEVELOPMENT	60	72	89	109	132	159	189	230	21%
DESIGN/INTEGRATION	21	25	31	38	46	55	66	80	22%
PROJECT MGMT/CONSULTING	20	24	30	37	45	54	65	79	21%
EDUCATION/TRAINING	5	6	8	9	11	13	16	20	22%
OPERATIONS/MAINTENANCE	5	6	8	10	12	14	17	21	22%
TOTAL	2073	2252	2478	2725	3007	3329	3704	4149	10%
AUTOMOTIVE									
PROFESSIONAL SERVICES	299	320	345	372	401	435	473	516	8%
CONSULTING	70	76	88	99	113	128	146	167	14%
SOFTWARE DEVELOPMENT	186	196	204	213	223	233	246	258	5%
EDUCATION/TRAINING	42	47	53	59	65	74	81	91	12%
SYSTEMS OPERATIONS - TOTAL	36	42	50	60	71	84	101	121	19%
PLATFORM OPERATIONS	17	20	23	27	30	34	38	44	14%
APPLICATION OPERATIONS	19	22	27	33	40	50	62	77	23%
SYSTEMS INTEGRATION	19	23	28	34	41	49	59	72	21%
SOFTWARE DEVELOPMENT	10	12	15	18	22	27	32	39	21%
DESIGN/INTEGRATION	3	4	5	6	8	9	11	13	21%
PROJECT MGMT/CONSULTING	3	4	5	6	8	9	11	13	21%
EDUCATION/TRAINING	1	1	1	1	2	2	3	3	22%
OPERATIONS/MAINTENANCE	1	1	1	2	2	2	3	3	22%
TOTAL	354	384	423	465	513	568	633	709	10%

TABLE B

IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
AEROSPACE									
PROFESSIONAL SERVICES	416	445	480	516	558	604	657	717	8%
CONSULTING	98	106	122	138	157	178	203	232	14%
SOFTWARE DEVELOPMENT	259	273	284	296	310	324	341	358	5%
EDUCATION/TRAINING	59	66	74	82	91	102	113	127	11%
SYSTEMS OPERATIONS - TOTAL	49	57	68	81	97	115	137	165	19%
PLATFORM OPERATIONS	23	27	32	37	42	47	52	60	14%
APPLICATION OPERATIONS	26	31	36	45	55	68	85	105	23%
SYSTEMS INTEGRATION	26	32	39	48	58	70	83	102	21%
SOFTWARE DEVELOPMENT	14	17	21	26	31	38	45	55	21%
DESIGN/INTEGRATION	5	6	7	9	11	13	16	19	22%
PROJECT MGMT/CONSULTING	5	6	7	9	11	13	15	19	21%
EDUCATION/TRAINING	1	1	2	2	3	3	4	5	22%
OPERATIONS/MAINTENANCE	1	1	2	2	3	3	4	5	22%
TOTAL	491	534	587	646	713	789	878	983	10%
ELECTRICAL MACHINERY									
PROFESSIONAL SERVICES	812	867	936	1007	1087	1178	1281	1398	8%
CONSULTING	191	207	238	269	306	347	395	452	14%
SOFTWARE DEVELOPMENT	505	532	554	577	605	633	665	699	5%
EDUCATION/TRAINING	115	128	144	161	177	199	221	247	11%
SYSTEMS OPERATIONS - TOTAL	95	112	133	159	189	224	268	321	19%
PLATFORM OPERATIONS	44	52	62	71	81	91	102	117	14%
APPLICATION OPERATIONS	51	59	71	87	108	133	166	204	23%
SYSTEMS INTEGRATION	51	62	76	94	113	136	163	198	21%
SOFTWARE DEVELOPMENT	28	33	41	51	61	73	87	106	21%
DESIGN/INTEGRATION	10	11	14	17	21	25	30	37	22%
PROJECT MGMT/CONSULTING	9	11	14	17	21	25	30	36	21%
EDUCATION/TRAINING	2	3	3	4	5	6	7	9	22%
OPERATIONS/MAINTENANCE	3	3	4	4	6	6	8	10	22%
TOTAL	958	1040	1145	1259	1390	1538	1712	1917	10%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
CONSTRUCTION									
PROFESSIONAL SERVICES	102	109	117	125	132	143	156	168	7%
CONSULTING	24	26	28	31	34	37	41	45	9%
SOFTWARE DEVELOPMENT	63	67	71	75	79	84	90	96	6%
EDUCATION/TRAINING	15	16	18	19	19	22	25	27	9%
SYSTEMS OPERATIONS - TOTAL	15	17	19	22	25	29	34	40	16%
PLATFORM OPERATIONS	6	7	8	9	10	11	12	13	11%
APPLICATION OPERATIONS	9	10	12	14	15	18	22	27	18%
SYSTEMS INTEGRATION	3	4	4	5	5	7	9	10	19%
SOFTWARE DEVELOPMENT	2	2	2	2	3	4	5	6	22%
DESIGN/INTEGRATION	1	1	1	1	1	1	1	2	14%
PROJECT MGMT/CONSULTING	1	1	1	1	1	2	2	3	18%
EDUCATION/TRAINING	0	0	0	0	0	0	0	0	24%
OPERATIONS/MAINTENANCE	0	0	0	0	0	0	0	0	24%
TOTAL	120	130	140	152	163	180	198	218	9%
PROCESS									
PROFESSIONAL SERVICES	789	843	919	998	1087	1188	1303	1434	9%
CONSULTING	184	203	234	266	301	344	394	451	14%
SOFTWARE DEVELOPMENT	499	521	548	578	611	620	687	730	6%
EDUCATION/TRAINING	106	119	137	155	174	225	222	252	13%
SYSTEMS OPERATIONS - TOTAL	156	183	218	261	311	370	442	532	19%
PLATFORM OPERATIONS	69	82	97	112	127	142	160	183	14%
APPLICATION OPERATIONS	86	101	121	149	184	227	283	349	23%
SYSTEMS INTEGRATION	29	33	37	43	51	61	74	88	18%
SOFTWARE DEVELOPMENT	16	18	21	24	28	34	42	50	19%
DESIGN/INTEGRATION	5	5	6	7	8	9	11	14	18%
PROJECT MGMT/CONSULTING	5	6	6	7	9	11	13	15	18%
EDUCATION/TRAINING	2	2	2	2	3	4	4	5	15%
OPERATIONS/MAINTENANCE	2	2	2	2	3	4	4	5	15%
TOTAL	974	1059	1174	1302	1449	1619	1820	2053	11%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
CONSUMER GOODS									
PROFESSIONAL SERVICES	231	247	269	292	318	347	381	419	9%
CONSULTING	54	59	68	78	88	100	115	132	14%
SOFTWARE DEVELOPMENT	146	152	160	169	179	181	201	214	6%
EDUCATION/TRAINING	31	35	40	45	51	66	65	74	13%
SYSTEMS OPERATIONS - TOTAL	46	54	64	77	91	108	130	156	19%
PLATFORM OPERATIONS	20	24	29	33	37	42	47	54	14%
APPLICATION OPERATIONS	25	30	36	44	54	67	83	102	23%
SYSTEMS INTEGRATION	8	9	10	12	14	17	21	25	18%
SOFTWARE DEVELOPMENT	5	5	6	7	8	10	12	14	18%
DESIGN/INTEGRATION	1	1	2	2	2	3	3	4	18%
PROJECT MGMT/CONSULTING	1	2	2	2	3	3	4	4	18%
EDUCATION/TRAINING	0	1	1	1	1	1	1	1	14%
OPERATIONS/MAINTENANCE	0	1	1	1	1	1	1	1	14%
TOTAL	285	310	343	381	423	473	532	600	11%
CHEMICALS/PHARM.									
PROFESSIONAL SERVICES	217	232	253	275	300	328	360	396	9%
CONSULTING	51	56	64	73	83	95	109	125	14%
SOFTWARE DEVELOPMENT	138	144	151	159	169	171	190	201	6%
EDUCATION/TRAINING	29	33	38	43	48	62	61	70	13%
SYSTEMS OPERATIONS - TOTAL	43	51	61	73	87	103	124	149	19%
PLATFORM OPERATIONS	19	23	27	31	36	40	45	51	14%
APPLICATION OPERATIONS	24	28	34	42	51	64	79	97	23%
SYSTEMS INTEGRATION	8	9	10	11	14	16	20	23	18%
SOFTWARE DEVELOPMENT	4	5	6	6	8	9	11	13	18%
DESIGN/INTEGRATION	1	1	2	2	2	2	3	4	18%
PROJECT MGMT/CONSULTING	1	2	2	2	2	3	3	4	18%
EDUCATION/TRAINING	0	1	1	1	1	1	1	1	14%
OPERATIONS/MAINTENANCE	0	1	1	1	1	1	1	1	14%
TOTAL	269	292	324	360	400	447	503	568	11%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
PETROLEUM									
PROFESSIONAL SERVICES	398	425	462	500	544	593	649	712	9%
CONSULTING	96	106	120	136	153	173	197	225	13%
SOFTWARE DEVELOPMENT	245	256	270	284	301	306	338	359	6%
EDUCATION/TRAINING	57	63	72	80	90	113	113	128	12%
SYSTEMS OPERATIONS - TOTAL	80	94	112	134	160	190	228	275	19%
PLATFORM OPERATIONS	38	44	53	61	69	78	88	101	15%
APPLICATION OPERATIONS	43	50	60	74	91	113	141	174	23%
SYSTEMS INTEGRATION	54	60	67	77	88	100	116	133	14%
SOFTWARE DEVELOPMENT	30	33	37	43	49	56	64	74	14%
DESIGN/INTEGRATION	8	9	10	12	13	15	18	21	15%
PROJECT MGMT/CONSULTING	10	12	13	15	17	19	23	26	14%
EDUCATION/TRAINING	3	3	4	4	5	6	6	7	13%
OPERATIONS/MAINTENANCE	2	3	3	3	4	4	5	6	14%
TOTAL	532	579	641	711	792	883	993	1120	11%
RUBBER/GLASS/MINERALS									
PROFESSIONAL SERVICES	376	401	438	475	518	566	621	684	9%
CONSULTING	88	97	111	127	144	164	188	215	14%
SOFTWARE DEVELOPMENT	238	248	261	275	291	295	328	348	6%
EDUCATION/TRAINING	51	57	65	74	83	107	106	120	13%
SYSTEMS OPERATIONS - TOTAL	75	88	105	126	150	178	213	257	19%
PLATFORM OPERATIONS	33	39	47	54	61	69	77	88	14%
APPLICATION OPERATIONS	42	49	58	72	89	110	136	168	23%
SYSTEMS INTEGRATION	13	15	17	20	24	28	34	41	18%
SOFTWARE DEVELOPMENT	8	8	10	11	13	16	19	23	18%
DESIGN/INTEGRATION	2	2	3	3	4	4	5	6	18%
PROJECT MGMT/CONSULTING	2	3	3	3	4	5	6	7	18%
EDUCATION/TRAINING	1	1	1	1	1	2	2	2	14%
OPERATIONS/MAINTENANCE	1	1	1	1	1	2	2	2	14%
TOTAL	464	505	560	621	692	773	869	981	11%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
COMMUNICATIONS									
PROFESSIONAL SERVICES	760	876	1003	1145	1313	1510	1745	2018	15%
CONSULTING	182	211	217	254	300	353	418	481	15%
SOFTWARE DEVELOPMENT	479	546	650	726	817	917	1036	1186	14%
EDUCATION/TRAINING	99	118	137	165	196	241	292	351	20%
SYSTEMS OPERATIONS - TOTAL	51	59	67	80	99	115	137	164	18%
PLATFORM OPERATIONS	21	24	27	31	35	39	45	51	13%
APPLICATION OPERATIONS	30	35	40	50	63	76	93	113	21%
SYSTEMS INTEGRATION	90	100	113	136	163	197	236	282	19%
SOFTWARE DEVELOPMENT	50	56	63	76	92	109	132	158	19%
DESIGN/INTEGRATION	14	16	19	22	27	32	39	47	20%
PROJECT MGMT/CONSULTING	18	19	21	26	31	38	45	53	18%
EDUCATION/TRAINING	4	4	5	6	6	8	9	11	19%
OPERATIONS/MAINTENANCE	4	5	5	6	7	9	10	12	16%
TOTAL	901	1035	1183	1362	1574	1822	2118	2463	15%
COMPUTER SERVICES									
PROFESSIONAL SERVICES	42	45	48	51	54	57	61	66	6%
CONSULTING	10	11	12	13	15	16	18	20	10%
SOFTWARE DEVELOPMENT	27	28	29	30	31	33	34	36	5%
EDUCATION/TRAINING	5	7	7	7	8	8	9	10	7%
SYSTEMS OPERATIONS - TOTAL	13	16	19	23	28	34	41	49	20%
PLATFORM OPERATIONS	6	7	8	10	12	13	15	18	17%
APPLICATION OPERATIONS	7	9	11	13	16	20	25	31	23%
SYSTEMS INTEGRATION	12	14	17	21	27	31	38	47	23%
SOFTWARE DEVELOPMENT	6	7	8	10	13	15	19	23	22%
DESIGN/INTEGRATION	3	3	4	5	6	7	9	10	23%
PROJECT MGMT/CONSULTING	2	3	4	5	6	7	8	10	23%
EDUCATION/TRAINING	0	0	1	1	1	1	1	2	23%
OPERATIONS/MAINTENANCE	0	1	1	1	1	1	1	2	22%
TOTAL	67	75	84	95	108	122	140	162	13%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
CONSULTANT									
PROFESSIONAL SERVICES	28	30	31	33	35	37	40	43	6%
CONSULTING	6	7	8	9	10	11	12	13	10%
SOFTWARE DEVELOPMENT	18	18	19	20	21	21	22	24	4%
EDUCATION/TRAINING	4	4	4	5	5	5	6	6	7%
SYSTEMS OPERATIONS - TOTAL	8	9	12	14	17	21	25	31	21%
PLATFORM OPERATIONS	3	4	4	5	6	7	9	10	19%
APPLICATION OPERATIONS	5	6	7	9	11	13	17	20	23%
SYSTEMS INTEGRATION	7	9	10	13	17	20	24	30	23%
SOFTWARE DEVELOPMENT	3	4	5	6	8	9	12	14	23%
DESIGN/INTEGRATION	2	2	2	3	4	4	5	7	23%
PROJECT MGMT/CONSULTING	2	2	2	3	4	4	5	7	24%
EDUCATION/TRAINING	0	0	0	0	1	1	1	1	24%
OPERATIONS/MAINTENANCE	0	0	0	0	1	1	1	1	24%
TOTAL	43	48	53	60	69	78	89	103	13%
HEALTH									
PROFESSIONAL SERVICES	613	670	746	828	924	1040	1168	1316	12%
CONSULTING	144	162	188	217	250	290	337	393	16%
SOFTWARE DEVELOPMENT	383	412	450	490	532	589	651	718	10%
EDUCATION/TRAINING	86	96	108	122	142	161	180	205	13%
SYSTEMS OPERATIONS - TOTAL	892	1022	1202	1410	1654	1942	2297	2726	18%
PLATFORM OPERATIONS	458	525	602	682	766	850	946	1069	13%
APPLICATION OPERATIONS	434	497	600	728	887	1092	1351	1657	22%
SYSTEMS INTEGRATION	159	178	202	230	259	295	341	392	14%
SOFTWARE DEVELOPMENT	86	96	110	125	140	159	187	215	14%
DESIGN/INTEGRATION	26	29	32	37	42	47	54	62	13%
PROJECT MGMT/CONSULTING	31	35	41	46	53	60	68	79	14%
EDUCATION/TRAINING	8	10	10	11	13	15	17	19	12%
OPERATIONS/MAINTENANCE	8	9	9	10	12	13	15	17	12%
TOTAL	1664	1870	2149	2469	2837	3277	3806	4434	15%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
HIGHER EDUCATION									
PROFESSIONAL SERVICES	394	436	492	555	628	712	812	927	13%
CONSULTING	92	105	124	145	171	200	236	279	18%
SOFTWARE DEVELOPMENT	246	268	295	325	359	401	451	502	11%
EDUCATION/TRAINING	56	63	73	84	99	111	126	145	15%
SYSTEMS OPERATIONS - TOTAL	187	212	247	286	330	382	445	519	16%
PLATFORM OPERATIONS	92	103	120	135	151	168	187	212	13%
APPLICATION OPERATIONS	95	109	127	151	179	214	258	307	19%
SYSTEMS INTEGRATION	77	88	103	122	143	171	208	249	19%
SOFTWARE DEVELOPMENT	41	48	56	66	77	93	113	134	19%
DESIGN/INTEGRATION	14	15	17	21	25	30	36	44	20%
PROJECT MGMT/CONSULTING	16	18	21	25	30	35	44	53	20%
EDUCATION/TRAINING	3	4	5	6	6	8	9	10	17%
OPERATIONS/MAINTENANCE	3	4	4	5	5	6	7	8	12%
TOTAL	658	737	842	962	1101	1265	1465	1695	15%
MEDIA									
PROFESSIONAL SERVICES	703	768	842	921	1012	1117	1239	1379	10%
CONSULTING	166	184	205	233	266	305	351	401	14%
SOFTWARE DEVELOPMENT	440	473	513	547	587	629	679	738	8%
EDUCATION/TRAINING	97	111	125	142	159	183	209	240	14%
SYSTEMS OPERATIONS - TOTAL	83	98	116	139	167	199	239	288	20%
PLATFORM OPERATIONS	37	43	51	60	68	77	88	101	15%
APPLICATION OPERATIONS	46	55	65	80	99	122	152	187	23%
SYSTEMS INTEGRATION	66	78	93	114	140	167	201	245	21%
SOFTWARE DEVELOPMENT	35	42	50	61	74	88	107	130	21%
DESIGN/INTEGRATION	12	15	18	21	26	31	38	47	21%
PROJECT MGMT/CONSULTING	13	15	18	22	27	33	39	48	21%
EDUCATION/TRAINING	3	3	4	5	6	7	8	10	22%
OPERATIONS/MAINTENANCE	3	3	4	5	6	8	9	11	20%
TOTAL	853	943	1052	1174	1320	1484	1680	1912	12%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
SCHOOLS									
PROFESSIONAL SERVICES	258	286	324	366	415	473	540	618	14%
CONSULTING	60	69	82	96	113	133	157	186	18%
SOFTWARE DEVELOPMENT	160	175	194	214	237	265	299	334	11%
EDUCATION/TRAINING	37	42	48	55	65	74	84	97	15%
SYSTEMS OPERATIONS - TOTAL	108	124	145	169	196	228	267	314	17%
PLATFORM OPERATIONS	47	53	62	70	79	88	98	111	13%
APPLICATION OPERATIONS	62	71	83	99	117	141	170	203	19%
SYSTEMS INTEGRATION	40	46	54	65	77	93	113	136	20%
SOFTWARE DEVELOPMENT	21	25	29	35	41	50	61	73	20%
DESIGN/INTEGRATION	7	7	9	11	13	15	19	23	21%
PROJECT MGMT/CONSULTING	9	10	12	14	17	20	25	30	20%
EDUCATION/TRAINING	2	2	3	3	3	4	5	6	18%
OPERATIONS/MAINTENANCE	1	2	2	2	3	3	4	4	16%
TOTAL	406	456	523	600	689	793	920	1067	15%
STATE/LOCAL GOV'T									
PROFESSIONAL SERVICES	1441	1605	1824	2069	2355	2692	3089	3544	14%
CONSULTING	337	386	462	544	641	758	898	1068	18%
SOFTWARE DEVELOPMENT	896	983	1091	1212	1342	1509	1706	1913	12%
EDUCATION/TRAINING	207	235	272	314	373	425	484	562	16%
SYSTEMS OPERATIONS - TOTAL	562	640	751	882	1030	1202	1409	1661	17%
PLATFORM OPERATIONS	215	243	285	327	368	408	454	517	13%
APPLICATION OPERATIONS	346	397	466	555	662	794	955	1144	19%
SYSTEMS INTEGRATION	179	206	245	297	355	427	521	629	20%
SOFTWARE DEVELOPMENT	97	111	132	161	190	229	281	340	20%
DESIGN/INTEGRATION	27	32	37	46	56	67	81	99	21%
PROJECT MGMT/CONSULTING	41	46	56	67	81	97	118	143	21%
EDUCATION/TRAINING	8	10	11	14	17	20	24	28	18%
OPERATIONS/MAINTENANCE	6	7	8	10	11	14	17	20	20%
TOTAL	2182	2451	2820	3248	3741	4321	5019	5834	15%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
TRANSPORTATION									
PROFESSIONAL SERVICES	172	188	201	214	244	245	264	284	7%
CONSULTING	40	44	49	53	59	64	70	77	9%
SOFTWARE DEVELOPMENT	109	118	124	130	152	145	155	165	6%
EDUCATION/TRAINING	23	26	28	31	33	36	39	42	8%
SYSTEMS OPERATIONS - TOTAL	99	118	144	178	211	249	296	358	20%
PLATFORM OPERATIONS	73	86	104	129	151	175	203	243	19%
APPLICATION OPERATIONS	27	32	39	49	60	75	93	115	24%
SYSTEMS INTEGRATION	64	72	82	98	119	143	176	211	20%
SOFTWARE DEVELOPMENT	35	39	45	53	65	78	97	117	20%
DESIGN/INTEGRATION	11	12	14	17	20	25	30	36	20%
PROJECT MGMT/CONSULTING	13	14	17	20	24	29	35	42	19%
EDUCATION/TRAINING	3	3	4	5	6	6	8	9	20%
OPERATIONS/MAINTENANCE	2	2	2	3	4	5	6	7	18%
TOTAL	336	378	427	490	574	637	736	853	14%
UTILITIES									
PROFESSIONAL SERVICES	199	212	226	241	258	277	300	323	7%
CONSULTING	63	70	75	81	87	95	104	113	8%
SOFTWARE DEVELOPMENT	90	93	98	104	111	118	126	135	6%
EDUCATION/TRAINING	45	49	53	56	59	64	70	76	7%
SYSTEMS OPERATIONS - TOTAL	21	24	27	32	36	39	46	53	14%
PLATFORM OPERATIONS	15	16	19	21	23	25	28	32	12%
APPLICATION OPERATIONS	7	8	9	11	13	14	18	21	18%
SYSTEMS INTEGRATION	200	217	241	275	309	341	381	428	12%
SOFTWARE DEVELOPMENT	112	121	135	154	173	190	213	239	12%
DESIGN/INTEGRATION	29	31	35	39	44	49	55	62	12%
PROJECT MGMT/CONSULTING	40	45	50	57	63	70	78	88	12%
EDUCATION/TRAINING	11	12	13	15	17	19	21	23	12%
OPERATIONS/MAINTENANCE	8	8	8	10	11	12	14	16	13%
TOTAL	420	453	495	548	602	658	727	805	10%

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IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
WHOLESALE DISTRIBUTION									
PROFESSIONAL SERVICES	445	477	502	528	557	590	627	666	6%
CONSULTING	103	114	123	132	142	155	168	183	8%
SOFTWARE DEVELOPMENT	283	298	311	323	336	352	369	387	4%
EDUCATION/TRAINING	58	65	69	74	79	84	89	95	6%
SYSTEMS OPERATIONS - TOTAL	105	126	151	179	214	256	306	368	19%
PLATFORM OPERATIONS	56	67	80	93	109	126	143	168	16%
APPLICATION OPERATIONS	49	59	71	87	106	131	163	201	22%
SYSTEMS INTEGRATION	108	127	148	177	213	247	294	351	18%
SOFTWARE DEVELOPMENT	56	66	77	92	111	128	154	184	19%
DESIGN/INTEGRATION	21	25	29	35	42	49	58	69	18%
PROJECT MGMT/CONSULTING	21	25	29	35	42	49	57	68	18%
EDUCATION/TRAINING	4	5	7	7	9	11	12	14	17%
OPERATIONS/MAINTENANCE	4	5	7	7	9	11	13	16	19%
TOTAL	658	730	801	884	985	1093	1227	1385	11%
RETAIL DISTRIBUTION									
PROFESSIONAL SERVICES	636	677	726	776	833	897	969	1050	7%
CONSULTING	150	162	183	203	227	256	288	325	12%
SOFTWARE DEVELOPMENT	397	417	435	454	476	496	522	548	5%
EDUCATION/TRAINING	89	98	108	119	130	146	159	177	10%
SYSTEMS OPERATIONS - TOTAL	192	230	282	348	431	527	649	805	23%
PLATFORM OPERATIONS	100	119	146	175	210	245	285	341	19%
APPLICATION OPERATIONS	92	111	136	173	221	283	364	464	27%
SYSTEMS INTEGRATION	133	161	191	226	275	338	411	498	21%
SOFTWARE DEVELOPMENT	68	84	99	117	142	174	212	257	20%
DESIGN/INTEGRATION	26	31	37	44	54	66	80	97	21%
PROJECT MGMT/CONSULTING	25	30	36	43	52	64	80	97	21%
EDUCATION/TRAINING	7	8	9	11	13	17	19	23	20%
OPERATIONS/MAINTENANCE	7	8	9	11	14	17	20	24	21%
TOTAL	960	1069	1199	1349	1538	1762	2029	2353	14%

TABLE B

IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
FINANCE									
PROFESSIONAL SERVICES	1706	1822	1916	2009	2115	2231	2362	2503	5%
CONSULTING	395	438	480	519	562	608	661	721	9%
SOFTWARE DEVELOPMENT	1084	1134	1166	1199	1239	1279	1328	1376	3%
EDUCATION/TRAINING	227	250	270	290	315	343	373	406	8%
SYSTEMS OPERATIONS - TOTAL	1462	1694	1991	2335	2735	3222	3793	4491	17%
PLATFORM OPERATIONS	531	599	685	768	848	941	1047	1176	12%
APPLICATION OPERATIONS	930	1095	1306	1567	1887	2281	2746	3315	20%
SYSTEMS INTEGRATION	155	176	204	236	280	342	439	530	20%
SOFTWARE DEVELOPMENT	78	87	102	117	141	171	220	267	20%
DESIGN/INTEGRATION	31	35	41	48	57	69	89	107	20%
PROJECT MGMT/CONSULTING	30	35	40	47	55	68	88	106	20%
EDUCATION/TRAINING	8	9	10	12	13	16	20	24	17%
OPERATIONS/MAINTENANCE	8	9	11	13	14	18	22	26	18%
TOTAL	3323	3691	4112	4579	5131	5796	6594	7524	12%
INSURANCE									
PROFESSIONAL SERVICES	1437	1530	1650	1776	1917	2078	2262	2467	8%
CONSULTING	335	363	413	463	520	585	661	748	13%
SOFTWARE DEVELOPMENT	908	958	1002	1047	1100	1154	1217	1283	5%
EDUCATION/TRAINING	194	210	235	266	297	339	385	436	13%
SYSTEMS OPERATIONS - TOTAL	779	900	1029	1207	1386	1596	1849	2151	15%
PLATFORM OPERATIONS	359	415	475	542	598	651	712	797	11%
APPLICATION OPERATIONS	419	485	554	665	788	945	1137	1354	19%
SYSTEMS INTEGRATION	133	149	169	195	224	273	337	399	18%
SOFTWARE DEVELOPMENT	67	75	85	98	113	137	162	189	17%
DESIGN/INTEGRATION	28	32	36	42	47	58	74	88	18%
PROJECT MGMT/CONSULTING	25	28	33	38	43	53	72	87	21%
EDUCATION/TRAINING	6	7	8	9	10	13	15	17	16%
OPERATIONS/MAINTENANCE	6	7	8	9	10	13	15	17	16%
TOTAL	2348	2580	2849	3178	3527	3948	4449	5017	12%

TABLE B

IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
SECURITIES									
PROFESSIONAL SERVICES	353	377	396	415	437	461	488	517	5%
CONSULTING	82	91	99	107	116	126	137	149	9%
SOFTWARE DEVELOPMENT	224	235	241	248	256	265	274	284	3%
EDUCATION/TRAINING	47	52	56	60	65	71	77	84	8%
SYSTEMS OPERATIONS - TOTAL	305	353	415	486	570	671	790	935	17%
PLATFORM OPERATIONS	111	125	143	160	176	196	218	245	12%
APPLICATION OPERATIONS	194	228	272	327	393	475	572	690	20%
SYSTEMS INTEGRATION	31	36	41	47	56	69	88	106	20%
SOFTWARE DEVELOPMENT	16	18	21	24	28	34	44	54	20%
DESIGN/INTEGRATION	6	7	8	10	11	14	18	22	20%
PROJECT MGMT/CONSULTING	6	7	8	9	11	14	18	21	20%
EDUCATION/TRAINING	2	2	2	2	3	3	4	5	16%
OPERATIONS/MAINTENANCE	2	2	2	3	3	4	4	5	18%
TOTAL	689	765	852	949	1063	1201	1366	1559	12%
FEDERAL GOVERNMENT									
PROFESSIONAL SERVICES	2179	1941	2070	2202	2354	2520	2711	2927	7%
CONSULTING	468	419	438	457	480	505	534	563	5%
SOFTWARE DEVELOPMENT	1283	1146	1258	1374	1513	1666	1840	2033	10%
EDUCATION/TRAINING	428	376	374	370	361	349	337	331	-2%
SYSTEMS OPERATIONS - TOTAL	1571	1711	1857	2012	2187	2387	2615	2861	9%
PLATFORM OPERATIONS	625	682	741	805	876	956	1048	1149	9%
APPLICATION OPERATIONS	946	1029	1116	1207	1311	1430	1566	1712	9%
SYSTEMS INTEGRATION	1319	1409	1651	1890	2209	2493	2882	3341	15%
SOFTWARE DEVELOPMENT	687	733	859	983	1150	1297	1500	1739	15%
DESIGN/INTEGRATION	225	239	281	322	376	424	490	567	15%
PROJECT MGMT/CONSULTING	315	338	396	453	529	597	690	799	15%
EDUCATION/TRAINING	40	43	50	57	67	75	88	102	16%
OPERATIONS/MAINTENANCE	53	56	66	75	88	99	115	133	15%
TOTAL	5068	5060	5578	6104	6750	7399	8208	9129	10%

TABLE B

IBM FORECAST WITH INFLATION
BY INDUSTRY MODE (BASE 1990 DOLLARS)

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
GRAND TOTAL									
PROFESSIONAL SERVICES	16761	24399	26526	28774	31372	34234	37714	41561	9%
CONSULTING	3901	10164	11175	12241	13466	14879	16507	18369	10%
SOFTWARE DEVELOPMENT	10402	7911	8570	9290	10133	11063	12180	13403	9%
EDUCATION/TRAINING	2458	6324	6781	7244	7773	8291	9027	9789	7%
SYSTEMS OPERATIONS - TOTAL	7237	9369	10847	12567	14519	16784	19502	22809	16%
PLATFORM OPERATIONS	3114	4706	5456	6297	7222	8267	9525	11078	15%
APPLICATION OPERATIONS	4123	4663	5391	6270	7297	8517	9977	11731	16%
SYSTEMS INTEGRATION	3096	3442	4018	4688	5520	6427	7624	8996	17%
SOFTWARE DEVELOPMENT	1636	1816	2122	2476	2915	3389	4020	4741	17%
DESIGN/INTEGRATION	538	598	698	818	965	1127	1341	1586	18%
PROJECT MGMT/CONSULTING	666	740	865	1009	1187	1382	1640	1937	17%
EDUCATION/TRAINING	125	142	164	189	223	260	306	359	17%
OPERATIONS/MAINTENANCE	132	147	169	197	230	271	317	373	17%
TOTAL	27094	37210	41391	46029	51410	57445	64840	73365	12%

TABLE C

IBM FORECAST BY SECTOR

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
INDUSTRIAL									
PROFESSIONAL SERVICES	5397	5766	6245	6740	7299	7932	8652	9467	8%
CONSULTING	1269	1385	1590	1799	2040	2316	2642	3020	14%
SOFTWARE DEVELOPMENT	3373	3539	3702	3876	4077	4217	4526	4776	5%
EDUCATION/TRAINING	755	842	954	1065	1182	1399	1485	1671	12%
SYSTEMS OPERATIONS - TOTAL	799	939	1120	1336	1589	1886	2256	2709	19%
PLATFORM OPERATIONS	365	430	512	589	669	748	840	964	14%
APPLICATION OPERATIONS	433	509	608	747	920	1138	1416	1745	23%
SYSTEMS INTEGRATION	324	379	452	546	655	781	932	1122	20%
SOFTWARE DEVELOPMENT	177	206	246	298	355	424	506	609	20%
DESIGN/INTEGRATION	57	66	79	96	117	138	165	199	20%
PROJECT MGMT/CONSULTING	59	70	83	100	120	144	171	206	20%
EDUCATION/TRAINING	16	18	22	25	31	38	44	53	19%
OPERATIONS/MAINTENANCE	16	18	22	26	32	38	45	54	19%
TOTAL	6520	7084	7817	8621	9542	10600	11840	13298	11%
ACADEMIC, GENERAL & PUBLIC									
PROFESSIONAL SERVICES	4609	5116	5738	6424	7239	8161	9259	10516	13%
CONSULTING	1100	1251	1422	1645	1911	2224	2600	3031	16%
SOFTWARE DEVELOPMENT	2849	3114	3461	3797	4188	4629	5160	5752	11%
EDUCATION/TRAINING	659	751	855	981	1140	1309	1499	1734	15%
SYSTEMS OPERATIONS - TOTAL	2025	2323	2729	3213	3768	4412	5203	6163	18%
PLATFORM OPERATIONS	966	1104	1282	1469	1660	1851	2073	2364	13%
APPLICATION OPERATIONS	1060	1219	1447	1744	2108	2561	3129	3798	21%
SYSTEMS INTEGRATION	894	1006	1161	1371	1608	1884	2239	2649	17%
SOFTWARE DEVELOPMENT	487	548	634	747	875	1022	1221	1443	17%
DESIGN/INTEGRATION	144	162	187	222	262	308	367	437	18%
PROJECT MGMT/CONSULTING	184	207	241	285	335	393	465	551	18%
EDUCATION/TRAINING	43	49	56	65	76	88	103	120	16%
OPERATIONS/MAINTENANCE	36	40	44	53	60	73	83	98	16%
TOTAL	7528	8444	9628	11007	12615	14457	16701	19328	15%

TABLE C

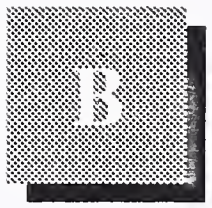
IBM FORECAST BY SECTOR

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
SERVICES									
PROFESSIONAL SERVICES	4576	4883	5191	5504	5860	6257	6709	7203	7%
CONSULTING	1064	1168	1298	1424	1567	1730	1915	2126	10%
SOFTWARE DEVELOPMENT	2897	3042	3154	3272	3407	3545	3711	3879	4%
EDUCATION/TRAINING	616	674	739	809	886	982	1083	1198	10%
SYSTEMS OPERATIONS - TOTAL	2842	3303	3869	4555	5336	6273	7387	8751	17%
PLATFORM OPERATIONS	1158	1325	1529	1737	1941	2158	2405	2726	13%
APPLICATION OPERATIONS	1684	1979	2340	2818	3395	4115	4982	6024	20%
SYSTEMS INTEGRATION	559	649	754	881	1048	1270	1570	1884	19%
SOFTWARE DEVELOPMENT	285	329	383	447	535	645	793	950	19%
DESIGN/INTEGRATION	113	131	151	178	211	257	319	383	19%
PROJECT MGMT/CONSULTING	108	125	146	172	203	248	314	380	20%
EDUCATION/TRAINING	26	31	36	41	48	59	70	83	17%
OPERATIONS/MAINTENANCE	28	32	37	43	50	61	74	88	19%
TOTAL	7978	8835	9813	10940	12244	13800	15666	17838	12%
FEDERAL GOVERNMENT									
PROFESSIONAL SERVICES	2179	1941	2070	2202	2354	2520	2711	2927	7%
CONSULTING	468	419	438	457	480	505	534	563	5%
SOFTWARE DEVELOPMENT	1283	1146	1258	1374	1513	1666	1840	2033	10%
EDUCATION/TRAINING	428	376	374	370	361	349	337	331	-2%
SYSTEMS OPERATIONS - TOTAL	1571	1711	1857	2012	2187	2387	2615	2861	9%
PLATFORM OPERATIONS	625	682	741	805	876	956	1048	1149	9%
APPLICATION OPERATIONS	946	1029	1116	1207	1311	1430	1566	1712	9%
SYSTEMS INTEGRATION	1319	1409	1651	1890	2209	2493	2882	3341	15%
SOFTWARE DEVELOPMENT	687	733	859	983	1150	1297	1500	1739	15%
DESIGN/INTEGRATION	225	239	281	322	376	424	490	567	15%
PROJECT MGMT/CONSULTING	315	338	396	453	529	597	690	799	15%
EDUCATION/TRAINING	40	43	50	57	67	75	88	102	16%
OPERATIONS/MAINTENANCE	53	56	66	75	88	99	115	133	15%
TOTAL	5068	5060	5578	6104	6750	7399	8208	9129	10%

TABLE C

IBM FORECAST BY SECTOR

SEGMENTATION	1990 ($M)	1991 ($M)	1992 ($M)	1993 ($M)	1994 ($M)	1995 ($M)	1996 ($M)	1997 ($M)	'91-'96 CAGR
GRAND TOTAL									
PROFESSIONAL SERVICES	16761	17706	19244	20870	22752	24871	27332	30113	9%
CONSULTING	3901	4222	4749	5326	5997	6775	7690	8739	13%
SOFTWARE DEVELOPMENT	10402	10841	11574	12320	13185	14056	15238	16439	7%
EDUCATION/TRAINING	2458	2643	2921	3224	3570	4039	4404	4935	11%
SYSTEMS OPERATIONS - TOTAL	7237	8276	9574	11116	12880	14958	17460	20484	16%
PLATFORM OPERATIONS	3114	3540	4063	4599	5145	5713	6366	7204	12%
APPLICATION OPERATIONS	4123	4736	5511	6517	7734	9245	11094	13280	19%
SYSTEMS INTEGRATION	3096	3442	4018	4688	5520	6427	7624	8996	17%
SOFTWARE DEVELOPMENT	1636	1816	2122	2476	2915	3389	4020	4741	17%
DESIGN/INTEGRATION	538	598	698	818	965	1127	1341	1586	18%
PROJECT MGMT/CONSULTING	666	740	865	1009	1187	1382	1640	1937	17%
EDUCATION/TRAINING	125	142	164	189	223	260	306	359	17%
OPERATIONS/MAINTENANCE	132	147	169	197	230	271	317	373	17%
TOTAL	27094	29424	32836	36673	41151	46256	52415	59593	12%



INPUT-Defined Industry Sectors

Industry Sector Definitions

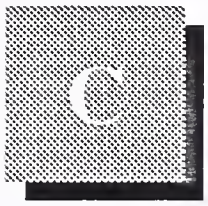
Industry Sector	SIC Code	Description
Discrete Manufacturing	23xx	Apparel and other finished products
	25xx	Furniture and fixtures
	27xx	Printing, publishing and allied industries
	31xx	Leather and leather products
	34xx	Fabricated metal products, except machinery and transportation equipment
	35xx	Industrial and commercial machinery and computer equipment
	36xx	Electronic and other electrical equipment and components, except computer equipment
	37xx	Transportation equipment
	38xx	Instruments; photo/med/optical goods; watches/clocks
	39xx	Miscellaneous manufacturing industry
Process Manufacturing	10xx	Metal mining
	12xx	Coal mining
	13xx	Oil and gas extraction
	14xx	Mining/quarrying nonmetalic minerals
	20xx	Food and kindred products
	21xx	Tobacco products
	22xx	Textile mill products
	24xx	Lumber and wood products, except furniture
	26xx	Paper and allied products
	28xx	Chemicals and allied products
	29xx	Petroleum refining and related industries
	30xx	Rubber and miscellaneous plastic products
	32xx	Stone, clay, glass and concrete products
	33xx	Primary metal industries
Transportation Services	40xx	Railroad transport
	41xx	Public transit/transport
	42xx	Motor freight transport/warehousing
	43xx	U.S. Postal Service
	44xx	Water transportation
	45xx	Air transportation (including airline reservation services in 4512)
	46xx	Pipelines, except natural gas
	47xx	Transportation services (including 472x, arrangement of passenger transportation)

Industry Sector Definitions

Industry Sector	SIC Code	Description
Telecommunications	48xx	Communications
Utilities	49xx	Electric, gas and sanitary services
Retail Distribution	52xx 53xx 54xx 55xx 56xx 57xx 58xx 59xx	Building materials General merchandise stores Food stores Automotive dealers, gas stations Apparel and accessory stores Home furniture, furnishings and accessory stores Eating and drinking places Miscellaneous retail
Wholesale Distribution	50xx 51xx	Wholesale trade - durable goods Wholesale trade - nondurable goods
Banking and Finance	60xx 61xx 62xx 67xx	Depositary institutions Nondepositary institutions Security and commodity brokers, dealers, exchanges and services Holding and other investment offices
Insurance	63xx 64xx	Insurance carriers Insurance agents, brokers and services
Health Services	80xx	Health services
Education	82xx	Educational services

Industry Sector Definitions

Industry Sector	SIC Code	Description
Business Services	65xx	Real estate
	70xx	Hotels, rooming houses, camps, and other lodging places
	72xx	Personal services
	73xx	Business services (except hotel reservation services in 7389)
	7389x	Hotel reservation services
	75xx	Automotive repair, services and parking
	76xx	Miscellaneous repair services
	78xx	Motion pictures
	79xx	Amusement and recreation services
	81xx	Legal services
	83xx	Social services
	84xx	Museums, art galleries, and botanical/zoological gardens
	86xx	Membership organizations
	87xx	Engineering, accounting, research, management, and related services
	89xx	Miscellaneous services
Federal Government	9xxx	
State and Local Government	9xxx	
Miscellaneous Industries	01xx	Agricultural production - crops
	02xx	Agricultural production - livestock/animals
	07xx	Agricultural services
	08xx	Forestry
	09xx	Fishing, hunting and trapping
	15xx	Building construction - general contractors, operative builders
	16xx	Heavy construction - contractors
	17xx	Construction - special trade contractors



IBM-Defined Industry Sectors

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
A1		MEDIUM/SMALL TELEPHONE COMPANIES
	4813	MEDIUM / SMALL TELEPHONE COMPANIES
A2		AMERICAN TELEPHONE AND TELEGRAPH
	481A	AMERICAN TELEPHONE AND TELEGRAPH (AT&T)
A3		LARGE TELEPHONE COMPANIES
	481B	LARGE TELEPHONE COMPANIES
A4		COMMON CARRIERS
	4822	COMMON CARRIERS
A5		CABLE TV AND MISCELLANEOUS COMPANIES
	4812	RADIOTELEPHONE COMMUNICATIONS
	4841	CABLE AND OTHER PAY TV SERVICES
	4899	COMMUNICATION SERVICES, NEC
BC		CONSULTANTS - COMPUTER SERVICERS
	738C	CONSULTANTS - COMPUTER SERVICERS
BD		DISTRIBUTION - COMPUTER SERVICERS
	738D	DISTRIBUTION - COMPUTER SERVICERS
BE		HIGHER EDUCATION - COMPUTER SERVICERS
	738E	EDUCATION - COMPUTER SERVICERS
BF		FINANCE/SECURITIES - COMPUTER SERVICERS
	738F	FINANCE/SECURITIES - COMPUTER SERVICERS
BG		STATE AND LOCAL - COMPUTER SERVICERS
	738G	STATE AND LOCAL - COMPUTER SERVICERS
BH		MEDICAL - COMPUTER SERVICERS
	738H	MEDICAL - COMPUTER SERVICERS
BK		MEDIA - COMPUTER SERVICERS
	738K	MEDIA - COMPUTER SERVICERS
BM		MANUFACTURING - COMPUTER SERVICERS
	738M	MANUFACTURING - COMPUTER SERVICERS
BN		INSURANCE - COMPUTER SERVICERS
	738N	INSURANCE - COMPUTER SERVICERS
BP		PROCESS - COMPUTER SERVICERS
	738P	PROCESS - COMPUTER SERVICERS
BR		POINT OF SALE VALUE ADDED DISTRIBUTORS
	737R	POINT OF SALE VALUE ADDED DISTRIBUTORS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
BT		TRANSPORTATION - COMPUTER SERVICERS
	738T	TRANSPORTATION - COMPUTER SERVICERS
BU		PUBLIC UTILITIES - COMPUTER SERVICERS
	738U	PUBLIC UTILITIES - COMPUTER SERVICERS
BY		FEDERAL - COMPUTER SERVICERS
	738Y	FEDERAL - COMPUTER SERVICERS
B1		SERVICE BUREAUS
	7374	DATA PROCESSING AND PREPARATION
B2		INFORMATION SYSTEMS CONSULTANTS
	7379	COMPUTER CONSULTANTS AND RELATED SERVICES, NEC
B3		DP EDUCATION FIRMS
	8243	DATA PROCESSING EDUCATION FIRMS
B4		REMOTE COMPUTING SERVICERS
	737B	REMOTE COMPUTING SERVICERS
	7375	INFORMATION RETRIEVAL SERVICES
B5		SYSTEMS INTEGRATORS
	7373	COMPUTER INTEGRATED SYSTEMS DESIGN
B6		COMPUTER FACILITY MANAGEMENT FIRMS
	7376	COMPUTER FACILITIES MANAGEMENT
B7		CONTRACT PROGRAMMING
	7371	COMPUTER PROGRAMMING SERVICES
B8		PACKAGE PROGRAMMING
	7372	PREPACKAGED SOFTWARE
C1		MANAGEMENT CONSULTANTS
	8741	MANAGEMENT SERVICES
	8742	MANAGEMENT CONSULTING SERVICES
	8743	PUBLIC RELATIONS SERVICES
	8748	BUSINESS CONSULTING, NEC
C2		CPA FIRMS & PUBLIC ACCOUNTANTS
	8721	ACCOUNTING, BOOKKEEPING AND AUDITING
C3		LEGAL FIRMS
	8111	LEGAL SERVICES
DA		APPAREL MANUFACTURERS
	2251	WOMENS HOSIERY, EXCEPT SOCKS
	2252	HOSIERY, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2253	KNIT OUTERWEAR MILLS
	2254	KNIT UNDERWEAR MILLS
	2259	KNITTING MILLS, NEC
	2311	MEN'S AND BOYS' SUITS AND COATS
	2321	MEN'S AND BOYS' SHIRTS
	2322	MEN'S AND BOYS' UNDERWEAR AND NIGHTWEAR
	2323	MEN'S AND BOYS' NECKWEAR
	2325	MEN'S AND BOYS' TROUSERS AND SLACKS
	2326	MEN'S AND BOYS' WORK CLOTHING
	2329	MEN'S AND BOYS' CLOTHING, NEC
	2331	WOMEN'S AND MISSES' BLOUSES AND SHIRTS
	2335	WOMEN'S, JUNIORS' AND MISSES' DRESSES
	2337	WOMEN'S AND MISSES' SUITS AND COATS
	2339	WOMEN'S AND MISSES' OUTERWEAR, NEC
	2341	WOMEN'S AND CHILDREN'S UNDERWEAR
	2342	BRAS, GIRDLES, AND ALLIED GARMENTS
	2353	HATS, CAPS AND MILLINERY
	2361	GIRLS' AND CHILDREN'S DRESSES AND BLOUSES
	2369	GIRLS' AND CHILDREN'S OUTERWEAR, NEC
	2371	FUR GOODS
	2381	FABRIC DRESS AND WORK GLOVES
	2384	ROBES AND DRESSING GOWNS
	2385	WATERPROOF OUTERWEAR
	2386	LEATHER AND SHEEP-LINED CLOTHING
	2387	APPAREL BELTS
	2389	APPAREL AND ACCESSORIES, NEC
	2391	CURTAINS AND DRAPERIES
	2392	HOUSEFURNISHINGS, NEC
	2393	TEXTILE BAGS
	2394	CANVAS AND RELATED PRODUCTS
	2395	PLEATING AND STITCHING
	2396	AUTOMOTIVE AND APPAREL TRIMMINGS
	2397	SCHIFFLI MACHINE EMBROIDERIES
	2399	FABRICATED TEXTILE PRODUCTS, NEC
	3111	LEATHER TANNING AND FINISHING
	3131	FOOTWEAR CUT STOCK
	3142	HOUSE SLIPPERS
	3143	MEN'S FOOTWEAR, EXCEPT ATHLETIC
	3144	WOMEN'S FOOTWEAR, EXCEPT ATHLETIC
	3149	FOOTWEAR, EXCEPT RUBBER, NEC
	3151	LEATHER GLOVES AND MITTENS
	3161	LUGGAGE
	3171	WOMENS HANDBAGS AND PURSES
	3172	PERSONAL LEATHER GOODS, NEC
	3199	LEATHER GOODS, NEC
D1		GENERAL MERCHANDISE RETAILERS
	5211	LUMBER AND OTHER BUILDING MATERIALS
	5231	PAINT, GLASS, AND WALLPAPER STORES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	5251	HARDWARE STORES
	5261	RETAIL NURSERIES, LAWN AND GARDEN STORES
	5311	DEPARTMENT STORES
	533A	DISCOUNT STORES
	5331	VARIETY STORES
	5399	MISCELLANEOUS GENERAL MERCHANDISE STORES
	5611	MEN'S AND BOYS' CLOTHING STORES
	5621	WOMEN'S CLOTHING STORES
	5632	WOMEN'S ACCESSORY AND SPECIALITY STORES
	5641	CHILDREN'S AND INFANTS' WEAR STORES
	5651	FAMILY CLOTHING STORES
	5661	SHOE STORES
	5699	MISCELLANEOUS APPAREL & ACCESSORY STORES
	5712	FURNITURE STORES
	5713	FLOOR COVERING STORES
	5714	DRAPERY, CURTAIN, AND UPHOLSTERY STORES
	5719	MISCELLANEOUS HOMEFURNISHING STORES
	5722	HOUSEHOLD APPLIANCE STORES
	5731	RADIO, TV AND ELECTRONIC STORES
	5734	COMPUTER AND SOFTWARE STORES
	5735	RECORD AND PRERECORDED TAPE STORES
	5736	MUSICAL INSTRUMENTS STORES
	5932	USED MERCHANDISE STORES
	5941	SPORTING GOODS AND BICYCLE SHOPS
	5942	BOOK STORES
	5943	STATIONERY STORES
	5944	JEWELRY STORES
	5945	HOBBY, TOY AND GAME SHOPS
	5946	CAMERA AND PHOTOGRAPHIC SUPPLY STORES
	5947	GIFT, NOVELTY AND SOUVENIR SHOPS
	5948	LUGGAGE AND LEATHER GOODS STORES
	5949	SEWING, NEEDLEWORK, AND PIECE GOODS
	5961	CATALOG AND MAIL-ORDER HOUSES
	5983	FUEL OIL DEALERS
	5984	LIQUIFIED PETROLEUM GAS DEALERS
	5989	FUEL DEALERS, NEC
	5992	FLORIST STORES
	5993	TOBACCO STORES AND STANDS
	5994	NEWSPAPER AND NEWSSTANDS
	5995	OPTICAL GOODS STORES
	5999	MISCELLANEOUS RETAIL STORES, NEC
D2		FOOD AND DRUG RETAILERS
	5411	GROCERY STORES
	5421	MEAT AND FISH MARKETS
	5431	FRUIT AND VEGETABLE MARKETS
	5441	CANDY, NUT, AND CONFECTIONERY STORES
	5451	DAIRY PRODUCTS STORES
	5461	RETAIL BAKERIES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	5499	MISCELLANEOUS FOOD STORES
	5812	EATING PLACES
	5813	DRINKING PLACES (ALCOHOLIC BEVERAGES)
	5912	DRUG STORES AND PROPRIETARY STORES
	5921	LIQUOR STORES
	5962	VENDING MACHINE OPERATORS
	5963	DIRECT SELLING ESTABLISHMENTS
E1		UNIVERSITIES, PROFESSIONAL SCHOOLS
	822A	MEDICAL SCHOOLS
	822B	PRIVATE UNIVERSITIES
	822H	PUBLIC UNIVERSITIES
	822J	UNIVERSITIES - CONSORTIA
	942E	UNIVERSITIES, STATE ENTERPRISE
	952E	UNIVERSITIES, COUNTY ENTERPRISE
	962E	UNIVERSITIES, CITY ENTERPRISE
E2		FOUR YEAR COLLEGES
	822C	PRIVATE FOUR YEAR COLLEGES
	822K	FOUR YEAR COLLEGES - CONSORTIA
	8221	PUBLIC FOUR YEAR COLLEGES
	942C	4 YEAR COLLEGES, STATE ENTERPRISE
	952C	4 YEAR COLLEGES, COUNTY ENTERPRISE
	962C	4 YEAR COLLEGES, CITY ENTERPRISE
E3		JUNIOR AND COMMUNITY COLLEGES
	822L	JUNIOR/COMMUNITY COLLEGES - CONSORTIA
	8222	JUNIOR AND COMMUNITY COLLEGES
	942B	JR./COMMUNITY COLLEGES, STATE ENTERPRISE
	952B	JR./COMMUNITY COLLEGES, COUNTY ENTERPRISE
	962B	JR./COMMUNITY COLLEGES, CITY ENTERPRISE
E4		MISCELLANEOUS HIGHER EDUCATION
	731E	PURCHASING AGENCIES, HIGHER EDUCATION
	8299	SCHOOLS AND EDUCATIONAL SERVICES/LABS
	8733	NONCOMMERCIAL RESEARCH ORGANIZATIONS
	9420	STATE BD OF EDUCATION-ADM/VOC/ETC
E5		LIBRARIES
	823A	LIBRARY NETWORKS AND UTILITIES
	8231	UNIVERSITY AND COLLEGE LIBRARIES
	9404	STATE LIBRARIES
	9504	COUNTY LIBRARIES
	9604	CITY LIBRARIES
E6		MUSEUMS, ZOOS
	8412	MUSEUMS AND ART GALLERIES
	8422	ARBORETA, ZOOLOGICAL AND BOTANICAL GARDENS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
E7		FOR-PROFIT HIGHER EDUCATION INSTITUTIONS
	822M	FOR-PROFIT HIGHER ED. INSTITUTIONS (ACCREDITED)
FX		REAL ESTATE
	6162	MORTGAGE BANKERS CORRESPONDENTS EX-LOAN
	6163	LOAN BROKERS EXCL-LOAN CORRESPONDENTS
	6517	LESSORS OF RAILROAD PROPERTY
	653A	COMBINED REAL ESTATE, INSURANCE
	6531	REAL ESTATE AGENTS, BROKERS, AND MANAGERS
	6553	CEMETERY SUBDIVIDERS AND DEVELOPERS
F1		COMMERCIAL BANKS - NOT BANK HOLDING CO.
	6011	FEDERAL RESERVE BANKS
	6019	CENTRAL RESERVE DEPOSITORY, NEC
	6022	STATE COMMERCIAL BANKS, FEDERAL RESERVE
	6022	STATE COMMERCIAL BANKS, FEDERAL RESERVE
	6023	STATE COMMERCIAL BANKS, NOT FED. RES., FDIC
	6023	STATE COMMERCIAL BANKS, NOT FED. RES., FDIC
	6024	STATE COMMERCIAL BANKS, NOT FED. RES., NOT FDIC
	6024	STATE COMMERCIAL BANKS, NOT FED. RES., NOT FDIC
	6025	NATIONAL BANKS, FEDERAL RESERVE
	6025	NATIONAL BANKS, FEDERAL RESERVE
	6028	PRIVATE BANKS, NOT INC., NOT FDIC
	6028	PRIVATE BANKS, NOT INC., NOT FDIC
F2		REGISTERED BANK HOLDING COMPANIES
	6712	BANK HOLDING COMPANIES
F3		CREDIT UNIONS
	6061	FEDERAL CREDIT UNIONS
	6062	STATE CREDIT UNIONS
F4		SAVINGS/SAVINGS & LOAN
	603A	MUTUAL SAVINGS BANKS, FEDERAL
	603B	MUTUAL SAVINGS BANKS, EXC. FEDERAL
	6035	FEDERAL SAVINGS INSTITUTIONS
	6036	SAVINGS INSTITUTIONS, EXC. FEDERAL
F5		ALL OTHER FINANCIAL
	6081	FOREIGN BANKS, BRANCHES AND AGENCIES
	6082	FOREIGN TRADE AND INTERNATIONAL BANKS
	6091	NONDEPOSIT TRUST FACILITIES
	6099	FUNCTIONS RELATED TO DEPOSIT BANKING
	6111	FEDERAL AND FEDERALLY SPONSORED CREDIT AGENCIES
	6141	PERSONAL CREDIT INSTITUTIONS
	6153	SHORT-TERM BUSINESS CREDIT INSTITUTIONS
	6159	MISC. BUSINESS CREDIT INSTITUTIONS
	651B	LESSORS OF COMPUTER EQUIP. - OWN INTERNAL USE
	6719	HOLDING COMPANIES, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	6798	REAL ESTATE INVESTMENT TRUSTS
	873F	COMMERCIAL PHYSICAL RESEARCH, FINANCE
G1		STATE GOVERNMENT
	9400	PUBLIC GAMING
	9402	PARKS AND BEACHES
	9407	TAX - INCOME,PROPERTY
	9408	PLANNING AND DEVELOPMENT
	9411	EXECUTIVE BRANCH
	9412	PERSONNEL
	9413	FINANCE
	9414	REVENUE
	9415	REGULATORY AGENCIES
	9416	ALCOHOLIC BEV CNTRL
	9417	LEGISLATIVE
	9418	JUSTICE ADMINISTRATION
	9419	CENTRAL DATA PROCESSING AUTHORITY
	9425	FOOD STAMPS
	9427	PROSECUTOR
	9430	TRAFFIC CONTROL
	9431	MOTOR VEHICLE ADMINISTRATION
	9432	HIGHWAY ADMINISTRATION AND CONSTRUCTION
	9433	TOLL ROADS, BRIDGES AND TUNNELS
	9436	WATERWAYS ADMIN REG
	9439	TRANSPORTATION, NEC
	9440	MENTAL HEALTH ADMINISTRATION
	9441	PUBLIC HEALTH ADMINISTRATION
	9442	AIR POLLUTION CONTROL
	9443	WATER POLLUTION CONTROL
	9444	SOCIAL SERVICES
	9445	GENERAL ASSISTANCE
	9446	PUBLIC ASSISTANCE - CATEGORICAL AID
	9447	PREVENTIVE SERVICES
	9448	MEDICAID
	9449	HEALTH/WELFARE, NEC
	9450	PROBATION
	9451	PAROLE
	9452	LAW ENFORCEMENT
	9453	CORRECTIONS/JAILS
	9454	FIRE
	9455	EMERGENCY SERVICES
	9457	DISPOSAL, LAND FILL
	9459	COURTS
	9460	WASTE WEIGHTING SCHEDULE
	9461	COMPUTER AIDED DISPATCH (E911) - LAW ENFORCEMENT
	9462	RECORDS MANAGEMENT - LAW ENFORCEMENT
	9463	IDENTIFICATION (AFIS)
	9464	COMPUTER AIDED DISPATCH (E911) - FIRE
	9465	RECORDS MANAGEMENT - FIRE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9469	NATURAL RESOURCES, NEC
	9471	BUILDING ADMIN.
	9472	PUBLIC HOUSING
	9473	PUBLIC CONSTRUCTION AND BUILDINGS
	9474	PUBLIC LAND ADMIN.
	9475	URBAN RENEWAL
	9476	URBAN SYSTEMS
	9479	PUBLIC WORKS, NEC
	9481	LABOR ADMINISTRATION
	9482	EMPLOYMENT SECURITY ADMINISTRATION
	9483	EMPLOYMENT SERVICES
	9484	UNEMPLOYMENT INSURANCE
	9485	WORKMENS COMPENSATION
	9486	STATE INSURANCE FUND
	9487	JTPA/CETA
	9490	PARKING STRUCTURE
	9492	ELECTION BOARDS / VOTER REGISTRATION
	9494	WATER SYSTEMS
	9495	SANITARY SERVICES
	9496	ENVIRONMENTAL SERVICES
	9498	INTERSTATE ORGAN., AUTHOR. & COMM., ETC.
	9499	UTILITIES, NEC
G2		CITY GOVERNMENT
	9600	PUBLIC GAMING
	9602	PARKS AND BEACHES
	9608	PLANNING AND DEVELOPMENT
	9610	RECORDS MANAGEMENT
	9611	EXECUTIVE BRANCH
	9612	PERSONNEL
	9613	FINANCE
	9614	REVENUE
	9615	REGULATORY AGENCIES
	9616	ALCOHOLIC BEV CNTRL
	9617	LEGISLATIVE
	9618	JUSTICE ADMINISTRATION
	9619	CENTRAL DP AUTHORITY
	9621	ADMINISTRATION
	9624	CENTRAL SERVICES
	9625	FOOD STAMPS
	9627	PROSECUTOR
	9630	TRAFFIC CONTROL
	9631	MOTOR VEHICLE ADMINISTRATION
	9632	HIGHWAY ADMINISTRATION - CONST. & MAINT.
	9633	TOLL ROADS, BRIDGES AND TUNNELS
	9635	MASS TRANSIT
	9636	WASTEWAYS ADMINISTRATION, REG.
	9639	TRANSPORTATION, NEC
	9640	MENTAL HEALTH ADMINISTRATION

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9641	PUBLIC HEALTH ADMINISTRATION
	9642	AIR POLLUTION CONTROL
	9643	WATER POLLUTION CONTROL
	9644	SOCIAL SERVICES
	9645	GENERAL ASSISTANCE
	9646	PUBLIC ASSISTANCE - CATEGORICAL AID
	9647	PREVENTIVE SERVICES
	9649	HEALTH/WELFARE, NEC
	9650	PROBATION
	9651	PAROLE
	9652	LAW ENFORCEMENT
	9653	CORRECTIONS/JAILS
	9654	FIRE
	9655	EMERGENCY SERVICES
	9657	DISPOSAL, LAND FILL
	9658	PLANNING BOARD
	9659	COURTS
	9660	WASTE WEIGHTING, SCH
	9661	COMPUTER AIDED DISPATCH (E911) - LAW ENFORCEMENT
	9662	RECORDS MANAGEMENT - LAW ENFORCEMENT
	9663	IDENTIFICATION (AFIS)
	9664	COMPUTER AIDED DISPATCH (E911) - FIRE
	9665	RECORDS MANAGEMENT - FIRE
	9669	NATURAL RESOURCES, NEC
	9671	BUILDING ADMIN.
	9672	PUBLIC HOUSING
	9673	PUBLIC CONSTRUCTION AND BUILDINGS
	9674	PUBLIC LAND ADMINISTRATION
	9675	URBAN RENEWAL
	9676	URBAN SYSTEMS
	9679	PUBLIC WORKS, NEC
	9687	JTPA/CETA
	9688	AIRPORT TERMINAL SERVICES
	9690	PARKING STRUCTURE
	9692	ELECTION BOARDS / VOTER REGISTRATION
	9694	WATER SUPPLY
	9695	SANITARY SERVICES
	9696	ENVIRONMENTAL SERVICES
	9699	UTILITIES, NEC
G3		COUNTY GOVERNMENT
	9502	PARKS AND BEACHES
	9505	BUDGET APPROP.-ACCTG
	9507	TAX-INCOME,PROPERTY
	9508	PLANNING AND DEVELOPMENT
	9510	RECORDS MANAGEMENT
	9511	EXECUTIVE BRANCH
	9512	PERSONNEL
	9513	FINANCE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9514	REVENUE
	9515	REGULATORY AGENCIES
	9517	LEGISLATIVE
	9518	JUSTICE ADMINISTRATION
	9519	CENTRAL DP AUTHORITY
	9521	ADMINISTRATION
	9524	CENTRAL SERVICES
	9525	FOOD STAMPS
	9527	PROSECUTOR
	9530	TRAFFIC CONTROL
	9531	MOTOR VEHICLE ADMINISTRATION
	9532	HIGHWAY ADMINISTRATION - CONST. & MAINT.
	9533	TOLL ROADS, BRIDGES AND TUNNELS
	9535	MASS TRANSIT
	9536	WASTEWAYS ADMINISTRATION, REG.
	9539	TRANSPORTATION, NEC
	9540	MENTAL HEALTH ADMINISTRATION
	9541	PUBLIC HEALTH ADMINISTRATION
	9542	AIR POLLUTION CONTROL
	9543	WATER POLLUTION CONTROL
	9544	SOCIAL SERVICES
	9545	GENERAL ASSISTANCE
	9546	PUBLIC ASSISTANCE - CATEGORICAL AID
	9547	PREVENTIVE SERVICES
	9549	HEALTH/WELFARE NEC
	9550	PROBATION
	9551	PAROLE
	9552	LAW ENFORCEMENT
	9553	CORRECTIONS/JAILS
	9554	FIRE
	9555	EMERGENCY SERVICES
	9557	DISPOSAL, LAND FILL
	9558	PLANNING BOARD
	9559	COURTS
	9560	WASTE WEIGHTING, SCH
	9561	COMPUTER AIDED DISPATCH (E911) - LAW ENFORCEMENT
	9562	RECORDS MANAGEMENT - LAW ENFORCEMENT
	9563	IDENTIFICATION (AFIS)
	9564	COMPUTER AIDED DISPATCH (E911) - FIRE
	9565	RECORDS MANAGEMENT - FIRE
	9569	NATURAL RESOURCES, NEC
	9571	BUILDING ADMIN.
	9574	PUBLIC LAND ADMINISTRATION
	9579	PUBLIC WORKS, NEC
	9587	JTPA/CETA
	9588	AIRPORT TERMINAL SERVICES
	9590	PARKING STRUCTURE
	9592	ELECTION BOARDS / VOTER REGISTRATION
	9594	WATER SUPPLY

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9595	SANITARY SERVICES
	9596	ENVIRONMENTAL SERVICES
	9599	UTILITIES, NEC
G4		SPECIAL DISTRICTS
	9708	ADMINISTRATION & PLANNING
	9718	JUSTICE ADMINISTRATION
	9727	PROSECUTOR
	9735	TRANSPORTATION
	9750	PROBATION
	9751	PAROLE
	9752	LAW ENFORCEMENT
	9753	CORRECTIONS/JAILS
	9754	FIRE
	9755	EMERGENCY SERVICES
	9759	COURTS
	9761	COMPUTER AIDED DISPATCH (E911) - LAW ENFORCEMENT
	9762	RECORDS MANAGEMENT - LAW ENFORCEMENT
	9763	IDENTIFICATION (AFIS)
	9764	COMPUTER AIDED DISPATCH (E911) - FIRE
	9765	RECORDS MANAGEMENT - FIRE
	9796	ENVIRONMENTAL SERVICES
H1		SHORT TERM HOSPITALS/UNIVERSITY HOSPITALS
	806A	UNIVERSITY HOSPITALS
	8062	GENERAL MEDICAL AND SURGICAL HOSPITALS
H2		LONG TERM HOSPITALS
	8063	PSYCHIATRIC HOSPITALS
	8069	OTHER LONG TERM HOSPITALS
H3		ALTERNATE HEALTH CARE FACILITIES
	8051	SKILLED NURSING CARE FACILITIES
	8059	NURSING AND PERSONAL CARE, NEC
	8082	HOME HEALTH CARE SERVICES
H4		MEDICAL GROUP CLINICS/OFFICES OF PHYSICIANS
	8011	OFFICES AND CLINICS OF MEDICAL DOCTORS
	8021	OFFICES AND CLINICS OF DENTISTS
	8031	OFFICES AND CLINICS OF OSTEOPATHIC PHYSICIANS
	8041	OFFICES AND CLINICS OF CHIROPRACTORS
	8042	OFFICES AND CLINICS OF OPTOMETRISTS
	8043	OFFICES AND CLINICS OF PODIATRISTS
	8049	OFFICES OF HEALTH PRACTITIONERS, NEC
	8052	MED GRP PRAC CLINICS
	8093	SPECIALITY OUTPATIENT CLINICS
H6		HEALTH DATA SERVICES
	809E	HEALTH DATA SERVICES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	942H	HEALTH SERVICES, STATE ENTERPRISE
	952H	HEALTH SERVICES, COUNTY ENTERPRISE
	962H	HEALTH SERVICES, CITY ENTERPRISE
H7		HEALTH CONSULTANTS
	809B	CONSULTANTS - MEDICAL
H8		CLINICAL LABS
	8071	MEDICAL LABORATORIES
	8072	DENTAL LABORATORIES
H9		HEALTH - OTHER
	731H	PURCHASING AGENCIES, HEALTH
	809A	HEALTH CARE COMPLEXES - REGIONAL MEDICAL PGMS
	809C	AR MEDIQUEST
	809D	COMP COMM HEALTH CENTERS
	8092	KIDNEY DIALYSIS CENTERS
	8099	HEALTH AND ALLIED SERVICES, NEC
	862A	PROFESSIONAL MEDICAL ASSOCIATIONS
	873H	COMMERCIAL PHYSICAL RESEARCH, MEDICAL
J2		AUTO/MOTOR VEH. - DEALERS, PARTS & REPAIR
	5012	AUTOMOBILES AND OTHER MOTOR VEHICLES
	5013	MOTOR VEHICLE SUPPLIES AND NEW PARTS
	5014	TIRES AND TUBES
	5015	MOTOR VEHICLE PARTS, USED
	5082	CONSTRUCTION AND MINING MACHINERY
	5083	FARM AND GARDEN MACHINERY
	5271	MOBILE HOMES
	5511	NEW AND USED CAR DEALERS
	5521	USED CAR DEALERS
	5531	AUTO AND HOME SUPPLY STORES
	5551	BOAT DEALERS
	5561	RECREATION VEHICLE DEALERS
	5571	MOTORCYCLE DEALERS
	5599	AUTOMOTIVE DEALERS, NEC
	7532	TOP AND BODY REPAIR AND PAINT SHOPS
	7533	AUTOMOTIVE EXHAUST SYSTEM REPAIR SHOPS
	7534	TIRE RETREADING AND REPAIR SHOPS
	7536	AUTOMOTIVE GLASS REPLACEMENT SHOPS
	7537	AUTOMOTIVE TRANSMISSION REPAIR SHOPS
	7538	GENERAL AUTOMOBILE REPAIR SHOPS
	7539	AUTOMOBILE REPAIR SHOPS, NEC
	7542	CARWASHES
	7549	AUTOMOTIVE SERVICES, NEC
J3		NON-DURABLE GOODS WHOLESALERS
	5111	PRINTING AND WRITING PAPER
	5112	STATIONERY AND OFFICE SUPPLIES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	5113	INDUSTRIAL AND PERSONAL SERVICE PAPER
	5122	DRUGS, PROPRIETARIES, AND SUNDRIES
	5131	PIECE GOODS AND NOTIONS
	5136	MEN'S AND BOYS' CLOTHING
	5137	WOMEN'S AND CHILDREN'S CLOTHING
	5139	FOOTWEAR
	5141	GROCERIES, GENERAL LINE
	5142	PACKAGED FROZEN FOODS
	5143	DAIRY PRODUCTS, EXC. DRIED OR CANNED
	5144	POULTRY AND POULTRY PRODUCTS
	5145	CONFECTIONERY
	5146	FISH AND SEAFOODS
	5147	MEATS AND MEAT PRODUCTS
	5148	FRESH FRUITS AND VEGETABLES
	5149	GROCERIES AND RELATED PRODUCTS, NEC
	5153	GRAIN AND FIELD BEANS
	5154	LIVESTOCK
	5159	FARM-PRODUCT RAW MATERIAL, NEC
	5162	PLASTICS MATERIALS AND BASIC SHAPES
	5169	CHEMICALS AND ALLIED PRODUCTS, NEC
	5181	BEER AND ALE
	5182	WINES AND DISTILLED BEVERAGES
	5191	FARM SUPPLY
	5192	BOOKS, PERIODICALS, AND NEWSPAPERS
	5193	FLOWERS AND FLORIST SUPPLIES
	5194	TOBACCO AND TOBACCO PRODUCTS
	5198	PAINTS, VARNISHES, AND SUPPLIES
	5199	NONDURABLE GOODS, NEC
J4		DURABLE GOODS WHOLESALERS
	5021	FURNITURE
	5023	HOMEFURNISHINGS
	5031	LUMBER, PLYWOOD, AND MILLWORK
	5032	BRICK, STONE AND RELATED MATERIALS
	5033	ROOFING, SIDING, AND INSULATION
	5039	CONSTRUCTION MATERIALS, NEC
	5043	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES
	5044	OFFICE EQUIPMENT
	5045	COMPUTERS, PERIPHERALS, AND SOFTWARE
	5046	COMMERCIAL EQUIPMENT, NEC
	5047	MEDICAL AND HOSPITAL EQUIPMENT
	5048	OPTHALMIC GOODS
	5049	PROFESSIONAL EQUIPMENT, NEC
	5051	METALS SERVICE CENTERS AND OFFICES
	5052	COAL AND OTHER MINERALS AND ORES
	5063	ELECTRICAL APPARATUS AND EQUIPMENT
	5064	ELECTRICAL APPLIANCES, TV, AND RADIOS
	5065	ELECTRONIC PARTS AND EQUIPMENT
	5072	HARDWARE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	5074	PLUMBING AND HYDRONIC HEATING SUPPLIES
	5075	WARM AIR HEATING AND AIR CONDITIONING
	5078	REFRIGERATION EQUIPMENT AND SUPPLIES
	5084	INDUSTRIAL MACHINERY AND EQUIPMENT
	5085	INDUSTRIAL SUPPLIES
	5087	SERVICE ESTABLISHMENT EQUIPMENT
	5088	TRANSPORTATION EQUIPMENT AND SUPPLIES
	5091	SPORTING AND RECREATIONAL GOODS
	5092	TOYS AND HOBBY GOODS AND SUPPLIES
	5093	SCRAP AND WASTE MATERIALS
	5094	JEWELRY, WATCHES, AND PRECIOUS STONES
	5099	MISCELLANEOUS DURABLE GOODS, NEC
J5		REPAIR SERVICES
	7622	RADIO AND TELEVISION REPAIR SHOPS
	7623	REFRIGERATION SERVICE AND REPAIR
	7629	ELECTRICAL REPAIR SHOPS, NEC
	7631	WATCH, CLOCK, AND JEWELRY REPAIR
	7641	REUPHOLSTERY AND FURNITURE REPAIR
	7692	WELDING REPAIR
	7694	ARMATURE REWINDING SHOPS
	7699	MISCELLANEOUS REPAIR SERVICES, NEC
J6		PERSONAL SERVICES
	7211	POWER LAUNDRIES, FAMILY AND COMMERCIAL
	7212	GARMENT PRESSING AND CLEANERS AGENTS
	7213	LINEN SUPPLY
	7215	COIN-OPERATED LAUNDRIES AND CLEANING
	7216	DRYCLEANING PLANTS, EXCEPT RUG
	7217	CARPET AND UPHOLSTERY CLEANING
	7218	INDUSTRIAL LAUNDERERS
	7219	LAUNDRY AND GARMENT SERVICES, NEC
	7221	PHOTOGRAPHIC STUDIOS, PORTRAIT
	7231	BEAUTY SHOPS
	7241	BARBER SHOPS
	7251	SHOE REPAIR AND SHOESHINE PARLORS
	7261	FUNERAL SERVICE AND CREMATORIES
	7291	TAX RETURN PREPARATION SERVICES
	7299	MISCELLANEOUS PERSONAL SERVICES, NEC
J7		LODGING SERVICES
	7011	HOTELS, MOTELS, AND TOURIST COURTS
	7021	ROOMING AND BOARDING HOUSES
	7032	SPORTING AND RECREATIONAL CAMPS
	7033	RECREATION VEHICLE PARKS AND CAMPSITES
	7041	MEMBERSHIP-BASIS ORGANIZATION HOTELS
J8		BUSINESS SERVICES
	7322	ADJUSTMENT AND COLLECTION SERVICES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	7323	CREDIT REPORTING SERVICES
	7335	COMMERCIAL PHOTOGRAPHY
	7336	COMMERCIAL ART AND GRAPHIC DESIGN
	7342	DISINFECTING AND EXTERMINATING SERVICES
	7349	BUILDING MAINTENANCE SERVICES, NEC
	7352	MEDICAL EQUIPMENT RENTAL
	7353	HEAVY CONSTRUCTION EQUIPMENT RENTAL
	7359	EQUIPMENT RENTAL AND LEASING, NEC (EXC. DP)
	7361	EMPLOYMENT AGENCIES
	7363	HELP SUPPLY SERVICES
	7381	DETECTIVE AND ARMORED CAR SERVICES
	7382	SECURITY SYSTEMS SERVICES
	7389	BUSINESS SERVICES, NEC
	8731	COMMERCIAL PHYSICAL RESEARCH
	8734	TESTING LABORATORIES
	8744	FACILITIES SUPPORT SERVICES (EXC. COMPUTER)
J9		RESIDENTIAL
	8361	RESIDENTIAL CARE
	8811	PRIVATE HOUSEHOLDS
K1		NEWSPAPER PUBLISHING
	2711	NEWSPAPERS, PUBLISHING AND PRINTING
K2		MAGAZINE/PERIODICAL PUBLISHING
	2721	PERIODICALS, PUBLISHING AND PRINTING
K3		BOOK PUBLISHING
	2731	BOOK PUBLISHING
K4		MISCELLANEOUS PUBLISHING
	274A	ELECTRONIC DATA BASE PUBLISHING
	2741	MISCELLANEOUS PUBLISHING
	7383	NEWS SYNDICATES
	873K	COMMERCIAL PHYSICAL RESEARCH, MEDIA
	8999	SERVICES, NEC
K5		COMMERCIAL PRINTING
	2732	BOOK PRINTING
	2752	COMMERCIAL PRINTING, LITHOGRAPHIC
	2754	COMMERCIAL PRINTING, GRAVURE
	2759	COMMERCIAL PRINTING, NEC
	2761	MANIFOLD BUSINESS FORMS
	2771	GREETING CARDS
	2782	BLANKBOOKS AND LOOSELEAF BINDERS
	2789	BOOKBINDING AND RELATED WORK
	2791	TYPESETTING
	2796	PLATEMAKING SERVICES
	7334	PHOTOCOPYING AND DUPLICATING SERVICES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	7338	SECRETARIAL AND COURT REPORTING
	7384	PHOTOFINISHING LABORATORIES
K6		ADVERTISING/MARKETING
	596A	RECORD AND TAPE CLUBS
	7311	ADVERTISING AGENCIES
	7312	OUTDOOR ADVERTISING SERVICES
	7313	RADIO, TV, PUBLISHER REPRESENTATIVES
	7319	ADVERTISING, NEC
	7331	DIRECT MAIL ADVERTISING SERVICES
	8732	COMMERCIAL NONPHYSICAL RESEARCH
K7		BROADCASTING
	4832	RADIO BROADCASTING STATIONS
	4833	TELEVISION BROADCASTING STATIONS
	484A	CABLE NETWORK PROGRAMMING
K8		ASSOCIATIONS AND CHURCHES
	8322	INDIVIDUAL AND FAMILY SERVICES
	8351	CHILD DAY CARE SERVICES
	8399	SOCIAL SERVICES, NEC
	8611	BUSINESS ASSOCIATIONS
	8621	PROFESSIONAL ORGANIZATIONS
	8631	LABOR ORGANIZATIONS
	8641	CIVIC AND SOCIAL ASSOCIATIONS
	8651	POLITICAL ORGANIZATIONS
	8661	RELIGIOUS ORGANIZATIONS
	8699	MEMBERSHIP ORGANIZATIONS, NEC
K9		ENTERTAINMENT AND LEISURE
	7812	MOTION PICTURE AND VIDEO PRODUCTION
	7819	MOTION PICTURE SERVICES
	7822	MOTION PICTURE AND TAPE DISTRIBUTION
	7829	MOTION PICTURE DISTRIBUTION SERVICES
	7832	MOTION PICTURE THEATERS, EXCEPT DRIVE-INS
	7833	DRIVE-IN MOTION PICTURE THEATERS
	7841	VIDEO TAPE RENTAL
	7911	DANCE HALLS, STUDIOS, SCHOOLS
	7922	THEATRICAL PRODUCERS AND MISC. SERVICES
	7929	ENTERTAINERS AND ENTERTAINMENT GROUPS
	7933	BOWLING CENTERS
	7941	SPORTS CLUBS, MANAGERS, PROMOTERS, ARENAS
	7948	RACING, INCLUDING TRACK OPERATION
	7991	PHYSICAL FITNESS FACILITIES
	7992	PUBLIC GOLF COURSES
	7993	COIN-OPERATED AMUSEMENT DEVICES
	7996	AMUSEMENT PARKS
	7997	MEMBERSHIP SPORTS AND RECREATION CLUBS
	7999	AMUSEMENT AND RECREATION, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
MA		AEROSPACE
	3721	AIRCRAFT
	3724	AIRCRAFT ENGINES AND ENGINE PARTS
	3728	AIRCRAFT PARTS AND EQUIPMENT, NEC
	3731	SHIP BUILDING AND REPAIRNG
	3761	GUIDED MISSILES AND SPACE VEHICLES
	3764	SPACE PROPULSION UNITS AND PARTS
	3769	SPACE VEHICLE EQUIPMENT, NEC
M1		CONSTRUCTION
	1521	SINGLE FAMILY HOUSING CONSTRUCTION
	1522	RESIDENTIAL CONSTRUCTION, NEC
	1531	OPERATIVE BUILDERS
	1541	INDUSTRIAL BUILDINGS AND WAREHOUSES
	1542	NONRESIDENTIAL CONSTRUCTION, NEC
	1611	HIGHWAY AND STREET CONSTRUCTION
	1622	BRIDGE, TUNNEL, AND ELEVATED HIGHWAY
	1623	WATER, SEWER AND UTILITY LINES
	1629	HEAVY CONSTRUCTION, NEC
	1711	PLUMBING, HEATING, AIR CONDITIONING
	1721	PAINTING, PAPER HANGING, AND DECORATING
	1731	ELECTRICAL WORK
	1741	MASONRY AND OTHER STONEWORK
	1742	PLASTERING, DRYWALL, AND INSULATION
	1743	TERRAZZO, TILE, MARBLE, AND MOSAIC WORK
	1751	CARPENTRY WORK
	1752	FLOOR LAYING AND FLOORWORK, NEC
	1761	ROOFING, SIDING, AND SHEET METAL WORK
	1771	CONCRETE WORK
	1781	WATER WELL DRILLING
	1791	STRUCTURAL STEEL ERECTION
	1793	GLASS AND GLAZING WORK
	1794	EXCAVATION WORK
	1795	WRECKING AND DEMOLITION WORK
	1796	INSTALLING BUILDING EQUIPMENT, NEC
	1799	SPECIAL TRADE CONTRACTORS, NEC
	651A	FACILITIES MANAGEMENT - REAL ESTATE
	6512	OPERATORS OF NONRESIDENTIAL BUILDINGS
	6513	OPERATORS OF APARTMENT BUILDINGS
	6514	DWELLING OPERATORS, EXC. APARTMENTS
	6515	MOBILE HOME SITE OPERATORS
	6519	LESSORS OF REAL PROPERTY, NEC
	6552	SUBDIVIDERS AND DEVELOPERS, NEC
	8711	ENGINEERING SERVICES
	8712	ARCHITECTURAL SERVICES
	8713	SURVEYING SERVICES
M2		MOTOR VEHICLE & OTHER TRANSPORTATION EQUIP.
	2451	MOBILE HOMES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	3465	AUTOMOTIVE STAMPINGS
	3511	TURBINES AND TURBINE GENERATOR SETS
	3519	INTERNAL COMBUSTION ENGINES, NEC
	3523	FARM MACHINERY AND EQUIPMENT
	3524	LAWN AND GARDEN EQUIPMENT
	3531	CONSTRUCTION MACHINERY AND EQUIPMENT
	3537	INDUSTRIAL TRUCKS AND TRACTORS
	3592	CARBURETORS, PISTONS, RINGS, VALVES
	3711	MOTOR VEHICLES AND PASSENGER CAR BODIES
	3713	TRUCK AND BUS BODIES
	3714	MOTOR VEHICLE PARTS AND ACCESSORIES
	3715	TRUCK TRAILERS
	3716	MOTOR HOMES
	3732	BOAT BUILDING AND REPAIRING
	3743	RAILROAD EQUIPMENT
	3751	MOTORCYCLES, BICYCLES, AND PARTS
	3792	TRAVEL TRAILERS AND CAMPERS
	3795	TANKS AND TANK COMPONENTS
	3799	TRANSPORTATION EQUIPMENT, NEC
M3		ELECTRICAL MACHINERY
	3568	POWER TRANSMISSION EQUIPMENT, NEC
	357L	DP MANUFACTURERS INTERNAL DP USE
	3571	ELECTRONIC COMPUTERS
	3572	COMPUTER STORAGE DEVICES
	3575	COMPUTER TERMINALS
	3577	COMPUTER PERIPHERAL EQUIPMENT, NEC
	3578	CALCULATING AND ACCOUNTING EQUIPMENT
	3579	OFFICE MACHINES, NEC
	3596	SCALES AND BALANCES, EXC. LABORATORY
	3612	TRANSFORMERS, EXCEPT ELECTRONIC
	3613	SWITCHGEAR AND SWITCHBOARD APPARATUS
	3621	MOTORS AND GENERATORS
	3624	CARBON AND GRAPHITE PRODUCTS
	3625	RELAYS AND INDUSTRIAL CONTROLS
	3629	ELECTRICAL INDUSTRIAL APPARATUS, NEC
	3631	HOUSEHOLD COOKING EQUIPMENT
	3632	HOUSEHOLD REFRIGERATORS AND FREEZERS
	3633	HOUSEHOLD LAUNDRY EQUIPMENT
	3634	ELECTRIC HOUSEWARES AND FANS
	3635	HOUSEHOLD VACUUM CLEANERS
	3639	HOUSEHOLD APPLIANCES, NEC
	3641	ELECTRIC LAMPS
	3643	CURRENT-CARRYING WIRING DEVICES
	3644	NONCURRENT-CARRYING WIRING DEVICES
	3645	RESIDENTIAL LIGHTING FIXTURES
	3646	COMMERCIAL LIGHTING FIXTURES
	3647	VEHICULAR LIGHTING EQUIPMENT
	3648	LIGHTING EQUIPMENT, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	3651	HOUSEHOLD AUDIO AND VIDEO EQUIPMENT
	3652	PRERECORDED RECORDS AND TAPES
	3661	TELEPHONE AND TELEGRAPH APPARATUS
	3663	RADIO AND TV COMMUNICATIONS EQUIPMENT
	3669	COMMUNICATIONS EQUIPMENT, NEC
	3671	ELECTRON TUBES
	3672	PRINTED CIRCUIT BOARDS
	3674	SEMICONDUCTORS AND RELATED DEVICES
	3675	ELECTRONIC CAPACITORS
	3676	ELECTRONIC RESISTORS
	3677	ELECTRONIC COILS AND TRANSFORMERS
	3678	ELECTRONIC CONNECTORS
	3679	ELECTRONIC COMPONENTS, NEC
	3691	STORAGE BATTERIES
	3692	PRIMARY BATTERIES, DRY AND WET
	3694	ENGINE ELECTRICAL EQUIPMENT
	3695	MAGNETIC AND OPTICAL RECORDING MEDIA
	3699	ELECTRICAL EQUIPMENT AND SUPPLIES, NEC
	3812	SEARCH AND NAVIGATION EQUIPMENT
	3821	LABORATORY APPARATUS AND FURNITURE
	3822	ENVIRONMENTAL CONTROLS
	3823	PROCESS CONTROL INSTRUMENTS
	3824	FLUID METERS AND COUNTING DEVICES
	3825	INSTRUMENTS TO MEASURE ELECTRICTY
	3826	ANALYTICAL INSTRUMENTS
	3827	OPTICAL INSTRUMENTS AND LENSES
	3829	MEASURING AND CONTROLLING DEVICES, NEC
	3841	SURGICAL AND MEDICAL INSTRUMENTS
	3842	SURGICAL APPLIANCES AND SUPPLIES
	3843	DENTAL EQUIPMENT AND SUPPLIES
	3844	X-RAY APPARATUS AND TUBES
	3845	ELECTROMEDICAL EQUIPMENT
	3851	OPHTHALMIC GOODS
	3861	PHOTOGRAPHIC EQUIPMENT AND SUPPLIES
	3873	WATCHES, CLOCKS, WATCHCASES AND PARTS
M5		FABRICATED PRODUCTS
	2511	WOOD HOUSEHOLD FURNITURE
	2512	UPHOLSTERED HOUSEHOLD FURNITURE
	2514	METAL HOUSEHOLD FURNITURE
	2515	MATTRESSES AND BEDSPRINGS
	2517	WOOD TV AND RADIO CABINETS
	2519	HOUSEHOLD FURNITURE, NEC
	2521	WOOD OFFICE FURNITURE
	2522	OFFICE FURNITURE, EXCEPT WOOD
	2531	PUBLIC BUILDING AND RELATED FURNITURE
	2541	WOOD PARTITIONS AND FIXTURES
	2542	PARTITIONS AND FIXTURES, EXCEPT WOOD
	2591	DRAPERY HARDWARE, BLINDS, SHADES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2599	FURNITURE AND FIXTURES, NEC
	3411	METAL CANS
	3412	METAL BARRELS, DRUMS, AND PAILS
	3421	CUTLERY
	3423	HAND AND EDGE TOOLS, NEC
	3425	HANDSAWS AND SAW BLADES
	3429	HARDWARE, NEC
	3431	METAL SANITARY WARE
	3432	PLUMBING FIXTURE FITTINGS AND TRIM
	3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
	3441	FABRICATED STRUCTURAL METAL
	3442	METAL DOORS, SASH, AND TRIM
	3443	FABRICATED PLATE WORK (BOILER SHOPS)
	3444	SHEET METAL WORK
	3446	ARCHITECTURAL METAL WORK
	3448	PREFABRICATED METAL BUILDINGS
	3449	MISCELLANEOUS METAL WORK
	3451	SCREW MACHINE PRODUCTS
	3452	BOLTS, NUTS, SCREWS, RIVETS AND WASHERS
	3466	CROWNS AND CLOSURES
	3469	METAL STAMPINGS, NEC
	3471	PLATING AND POLISHING
	3479	METAL COATING AND ALLIED SERVICES
	3482	SMALL ARMS AMMUNITION
	3483	AMMUNITION, EXC. SMALL ARMS, NEC
	3484	SMALL ARMS
	3489	ORDNANCE AND ACCESSORIES, NEC
	3491	INDUSTRIAL VALVES
	3492	FLUID POWER VALVES AND HOSE FITTINGS
	3493	STEEL SPRINGS, EXCEPT WIRE
	3494	VALVES AND PIPE FITTINGS, NEC
	3495	WIRE SPRINGS
	3496	MISCELLANEOUS FABRICATED WIRE PRODUCTS
	3497	METAL FOIL AND LEAF
	3498	FABRICATED PIPE AND FITTINGS
	3499	FABRICATED METAL PRODUCTS, NEC
	3532	MINING MACHINERY
	3533	OIL AND GAS FIELD MACHINERY
	3534	ELEVATORS AND MOVING STAIRWAYS
	3535	CONVEYORS AND CONVEYING EQUIPMENT
	3536	HOISTS, CRANES, AND MONORAIL
	3541	MACHINE TOOLS, METAL CUTTING TYPES
	3542	MACHINE TOOLS, METAL FORMING TYPES
	3543	INDUSTRIAL PATTERNS
	3544	SPECIAL DIES, TOOLS, JIGS & FIXTURES
	3545	MACHINE TOOL ACCESSORIES
	3546	POWER DRIVEN HANDTOOLS
	3547	ROLLING MILL MACHINERY
	3548	WELDING APPARATUS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	3549	METALWORKING MACHINERY, NEC
	3552	TEXTILE MACHINERY
	3553	WOODWORKING MACHINERY
	3554	PAPER INDUSTRIES MACHINERY
	3555	PRINTING TRADES MACHINERY
	3556	FOOD PRODUCTS MACHINERY
	3559	SPECIAL INDUSTRY MACHINERY, NEC
	3561	PUMPS AND PUMPING EQUIPMENT
	3562	BALL AND ROLLER BEARINGS
	3563	AIR AND GAS COMPRESSORS
	3564	BLOWERS AND FANS
	3565	PACKAGING MACHINERY
	3566	SPEED CHANGERS, DRIVES AND GEARS
	3567	INDUSTRIAL FURNACES AND OVENS
	3569	GENERAL INDUSTRIAL MACHINERY, NEC
	3581	AUTOMATIC VENDING MACHINES
	3582	COMMERCIAL LAUNDRY EQUIPMENT
	3585	REFRIGERATION AND HEATING EQUIPMENT
	3586	MEASURING AND DISPENSING PUMPS
	3589	SERVICE INDUSTRY MACHINES, NEC
	3593	FLUID POWER CYLINDERS AND ACTUATORS
	3594	FLUID POWER PUMPS AND MOTORS
	3599	INDUSTRIAL MACHINERY, NEC
	3911	JEWELRY, PRECIOUS METAL
	3914	SILVERWARE AND PLATED WARE
	3915	JEWELERS' MATERIALS AND LAPIDARY WORK
	3931	MUSICAL INSTRUMENTS
	3942	DOLLS AND STUFFED TOYS
	3944	GAMES, TOYS AND CHILDREN'S VEHICLES
	3949	SPORTING AND ATHLETIC GOODS, NEC
	3951	PENS AND MECHANICAL PENCILS
	3952	LEAD PENCILS AND ART GOODS
	3953	MARKING DEVICES
	3955	CARBON PAPER AND INKED RIBBONS
	3961	COSTUME JEWELRY
	3965	FASTENERS, BUTTONS, NEEDLES AND PINS
	3991	BROOMS AND BRUSHES
	3993	SIGNS AND ADVERTISING SPECIALITIES
	3995	BURIAL CASKETS
	3996	HARD SURFACE FLOOR COVERINGS, NEC
	3999	MANUFACTURING INDUSTRIES, NEC
N1		LIFE INSURANCE CARRIERS
	6311	INSURANCE CARRIERS - LIFE
	6321	INSURANCE CARRIERS - HEALTH AND ACCIDENT
N2		PROPERTY AND LIABILITY INSURANCE CARRIERS
	6331	INSURANCE CARRIERS - PROPERTY/LIABILITY
	6351	SURETY COMPANIES

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	6361	TITLE INSURANCE
	6541	TITLE ABSTRACT OFFICES
N3		MEDICAL INSURANCE PLANS
	6324	HOSPITAL AND MEDICAL SERVICE PLANS
N4		INSURANCE AGENTS AND BROKERS
	6411	INSURANCE AGENTS, BROKERS, AND SERVICE
N5		OTHER INSURANCE
	6371	PENSION, HEALTH AND WELFARE FUNDS
	6399	INSURANCE CARRIERS, NEC
	873N	COMMERCIAL PHYSICAL RESEARCH, INSURANCE
P1		PRIMARY METALS
	3312	BLAST FURNACES AND STEEL MILLS
	3313	ELECTROMETALLURGICAL PRODUCTS
	3315	STEEL WIRE AND RELATED PRODUCTS
	3316	COLD FINISHING OF STEEL SHAPES
	3317	STEEL PIPE AND TUBES
	3321	GRAY AND DUCTILE IRON FOUNDRIES
	3322	MALLEABLE IRON FOUNDRIES
	3324	STEEL INVESTMENT FOUNDRIES
	3325	STEEL FOUNDRIES, NEC
	3331	PRIMARY COPPER
	3334	PRIMARY ALUMINUM
	3339	PRIMARY NONFERROUS METALS, NEC
	3341	SECONDARY NONFERROUS METALS
	3351	COPPER ROLLING AND DRAWING
	3353	ALUMINUM SHEET, PLATE AND FOIL
	3354	ALUMINUM EXTRUDED PRODUCTS
	3355	ALUMINUM ROLLING AND DRAWING, NEC
	3356	NONFERROUS ROLLING AND DRAWING, NEC
	3357	NONFERROUS WIREDRAWING AND INSULATING
	3363	ALUMINUM DIE-CASTINGS
	3364	NONFERROUS DIE-CASTINGS, EXC. ALUMINUM
	3365	ALUMINUM FOUNDRIES
	3366	COPPER FOUNDRIES
	3369	NONFERROUS FOUNDRIES, NEC
	3398	METAL HEAT TREATING
	3399	PRIMARY METAL PRODUCTS, NEC
	3462	IRON AND STEEL FORGINGS
	3463	NONFERROUS FORGINGS
P2		FOREST PRODUCTS
	0811	TIMBER TRACTS
	0831	FOREST PRODUCTS
	0851	FORESTRY SERVICES
	2411	LOGGING

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2421	SAWMILLS AND PLANING MILLS, GENERAL
	2426	HARDWOOD DIMENSION AND FLOORING MILLS
	2429	SPECIAL PRODUCT SAWMILLS, NEC
	2431	MILLWORK
	2434	WOOD KITCHEN CABINETS
	2435	HARDWOOD VENEER AND PLYWOOD
	2436	SOFTWOOD VENEER AND PLYWOOD
	2439	STRUCTURAL WOOD MEMBERS, NEC
	2441	NAILED WOODEN BOXES AND SHOOK
	2448	WOOD PALLETS AND SKIDS
	2449	WOOD CONTAINERS, NEC
	2452	PREFABRICATED WOOD BUILDINGS
	2491	WOOD PRESERVING
	2493	RECONSTITUTED WOOD PRODUCTS
	2499	WOOD PRODUCTS, NEC
	2611	PULP MILLS
	2621	PAPER MILLS
	2631	PAPERBOARD MILLS
	2652	SETUP PAPERBOARD BOXES
	2653	CORRUGATED AND SOLID FIBER BOXES
	2655	FIBER CANS, DRUMS, AND SIMILIAR PRODUCTS
	2656	SANITARY FOOD CONTAINERS
	2657	FOLDING PAPERBOARD BOXES
	2671	PAPER COATED AND LAMINATED, PACKAGING
	2672	PAPER COATED AND LAMINATED, NEC
	2673	BAGS: PLASTICS, LAMINATED AND COATED
	2674	BAGS: UNCOATED PAPER AND MULTIWALL
	2675	DIE-CUT PAPER AND BOARD
	2676	SANITARY PAPER PRODUCTS
	2677	ENVELOPES
	2678	STATIONARY PRODUCTS
	2679	CONVERTED PAPER PRODUCTS, NEC
P3		RUBBER, GLASS AND MINERAL PRODUCTS
	3011	TIRES AND INNER TUBES
	3021	RUBBER AND PLASTICS FOOTWEAR
	3052	RUBBER AND PLASTICS HOSE AND BELTING
	3053	GASKETS, PACKING AND SEALING DEVICES
	3061	MECHANICAL RUBBER GOODS
	3069	FABRICATED RUBBER PRODUCTS, NEC
	3081	UNSUPPORTED PLASTICS FILM AND SHEET
	3082	UNSUPPORTED PLASTICS PROFILE SHAPES
	3083	LAMINATED PLASTICS PLATE AND SHEET
	3084	PLASTICS PIPE
	3085	PLASTICS BOTTLES
	3086	PLASTICS FOAM PRODUCTS
	3087	CUSTOM COMPOUND PURCHASED RESINS
	3088	PLASTICS PLUMBING FIXTURES
	3089	PLASTICS PRODUCTS, NEC

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	3211	FLAT GLASS
	3221	GLASS CONTAINERS
	3229	PRESSED AND BLOWN GLASS, NEC
	3231	PRODUCTS OF PURCHASED GLASS
	3241	CEMENT, HYDRAULIC
	3251	BRICK AND STRUCTURAL CLAY TILE
	3253	CERAMIC WALL AND FLOOR TILE
	3255	CLAY REFRACTORIES
	3259	STRUCTURAL CLAY PRODUCTS, NEC
	3261	VITREOUS PLUMBING FIXTURES
	3262	VITREOUS CHINA TABLE AND KITCHENWARE
	3263	SEMIVITREOUS TABLE AND KITCHENWARE
	3264	PORCELAIN ELECTRICAL SUPPLIES
	3269	POTTERY PRODUCTS, NEC
	3271	CONCRETE BRICK AND BLOCK
	3272	CONCRETE PRODUCTS, NEC
	3273	READY-MIXED CONCRETE
	3274	LIME
	3275	GYPSUM PRODUCTS
	3281	CUT STONE AND STONE PRODUCTS
	3291	ABRASIVE PRODUCTS
	3292	ASBESTOS PRODUCTS
	3295	MINERALS, GROUND OR TREATED
	3296	MINERAL WOOL
	3297	NONCLAY REFRACTORIES
	3299	NONMETALLIC MINERAL PRODUCTS, NEC
P4		TEXTILES
	2211	BROADWOVEN FABRIC MILLS, COTTON
	2221	BROADWOVEN FABRIC MILLS, MANMADE
	2231	BROADWOVEN FABRIC MILLS, WOOL
	2241	NARROW FABRIC MILLS
	2257	WEFT KNIT FABRIC MILLS
	2258	LACE AND WARP KNIT FABRIC MILLS
	2261	FINISHING PLANTS, COTTON
	2262	FINISHING PLANTS, MANMADE
	2269	FINISHING PLANTS, NEC
	2273	CARPETS AND RUGS
	2281	YARN SPINNING MILLS
	2282	THROWING AND WINDING MILLS
	2284	THREAD MILLS
	2295	COATED FABRICS, NOT RUBBERIZED
	2296	TIRE CORD AND FABRICS
	2297	NONWOVEN FABRICS
	2298	CORDAGE AND TWINE
	2299	TEXTILE GOODS, NEC
P5		PHARMACEUTICALS
	2833	MEDICINALS AND BOTANICALS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2834	PHARMACEUTICAL PREPARATIONS
	2835	DIAGNOSTIC SUBSTANCES
	2836	BIOLOGICAL PRODUCTS, EXC. DIAGNOSTIC
P6		CONSUMER GOODS AND AGRIBUSINESS
	0111	WHEAT
	0112	RICE
	0115	CORN
	0116	SOYBEANS
	0119	CASH GRAINS, NEC
	0131	COTTON
	0132	TOBACCO
	0133	SUGAR CANE AND SUGAR BEETS
	0134	IRISH POTATOES
	0139	FIELD CROPS, EXCEPT CASH GRAINS, NEC
	0161	VEGETABLES AND MELONS
	0171	BERRY CROPS
	0172	GRAPES
	0173	TREE NUTS
	0174	CITRUS FRUITS
	0175	DECIDUOUS TREE FRUITS
	0179	FRUITS AND TREE NUTS, NEC
	0181	ORNAMENTAL NURSERY PRODUCTS
	0182	FOOD CROPS GROWN UNDER COVER
	0191	GENERAL FARMS, PRIMARILY CROP
	0211	BEEF CATTLE FEEDLOTS
	0212	BEEF CATTLE, EXCEPT FEEDLOTS
	0213	HOGS
	0214	SHEEP AND GOATS
	0219	GENERAL LIVESTOCK, NEC
	0241	DAIRY FARMS
	0251	BROILER, FRYER, AND ROASTER CHICKENS
	0252	CHICKEN EGGS
	0253	TURKEYS AND TURKEY EGGS
	0254	POULTRY HATCHERIES
	0259	POULTRY AND EGGS, NEC
	0271	FUR-BEARING ANIMALS AND RABBITS
	0272	HORSES AND OTHER EQUINES
	0273	ANIMAL AQUACULTURE
	0279	ANIMAL SPECIALTIES, NEC
	0291	GENERAL FARMS, PRIMARILY ANIMAL
	0711	SOIL PREPARATION SERVICES
	0721	CROP PLANTING AND PROTECTING
	0722	CROP HARVESTING
	0723	CROP PREPARATION SERVICES FOR MARKET
	0724	COTTON GINNING
	0741	VETERINARY SERVICES FOR LIVESTOCK
	0742	VETERINARY SERVICES, SPECIALITIES
	0751	LIVESTOCK SERVICES, EXCEPT VETERINARY

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	0752	ANIMAL SPECIALTY SERVICES
	0761	FARM LABOR CONTRACTORS
	0762	FARM MANAGEMENT SERVICES
	0781	LANDSCAPE COUNSELING AND PLANNING
	0782	LAWN AND GARDEN SERVICES
	0783	ORNAMENTAL SHRUB AND TREE SERVICES
	0912	FINFISH
	0913	SHELLFISH
	0919	MISCELLANEOUS MARINE PRODUCTS
	0921	FISH HATCHERIES AND PRESERVES
	0971	HUNTING, TRAPPING, GAME PROPAGATION
	2011	MEAT PACKING PLANTS
	2013	SAUSAGES AND OTHER PREPARED MEATS
	2015	POULTRY SLAUGHTERING AND PROCESSING
	2021	CREAMERY BUTTER
	2022	CHEESE, NATURAL AND PROCESSED
	2023	DRY, CONDENSED, EVAPORATED PRODUCTS
	2024	ICE CREAM AND FROZEN DESSERTS
	2026	FLUID MILK
	2032	CANNED SPECIALTIES
	2033	CANNED FRUITS AND VEGETABLES
	2034	DEHYDRATED FRUITS, VEGETABLES, SOUPS
	2035	PICKLES, SAUCES, AND SALAD DRESSINGS
	2037	FROZEN FRUITS AND VEGETABLES
	2038	FROZEN SPECIALTIES, NEC
	2041	FLOUR AND OTHER GRAIN MILL PRODUCTS
	2043	CEREAL BREAKFAST FOODS
	2044	RICE MILLING
	2045	PREPARED FLOUR MIXES AND DOUGHS
	2046	WET CORN MILLING
	2047	PET FOOD
	2048	PREPARED FEEDS, NEC
	2051	BREAD, CAKE, AND RELATED PRODUCTS
	2052	COOKIES AND CRACKERS
	2053	FROZEN BAKERY PRODUCTS, EXC. BREAD
	2061	RAW CANE SUGAR
	2062	CANE SUGAR REFINING
	2063	BEET SUGAR
	2064	CANDY AND OTHER CONFECTIONARY PRODUCTS
	2066	CHOCOLATE AND COCOA PRODUCTS
	2067	CHEWING GUM
	2068	SALTED AND ROASTED NUTS AND SEEDS
	2074	COTTONSEED OIL MILLS
	2075	SOYBEAN OIL MILLS
	2076	VEGETABLE OIL MILLS, NEC
	2077	ANIMAL AND MARINE FATS AND OILS
	2079	EDIBLE FATS AND OILS, NEC
	2082	MALT BEVERAGES
	2083	MALT

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2084	WINES, BRANDY, AND BRANDY SPIRITS
	2085	DISTILLED AND BLENDED LIQUOR
	2086	BOTTLED AND CANNED SOFT DRINKS
	2087	FLAVORING EXTRACTS AND SYRUPS, NEC
	2091	CANNED AND CURED FISH AND SEAFOOD
	2092	FRESH OR FROZEN PREPARED FISH
	2095	ROASTED COFFEE
	2096	POTATO CHIPS, CORN CHIPS AND SIMILAR SNACKS
	2097	MANUFACTURED ICE
	2098	MACARONI AND SPAGHETTI
	2099	FOOD PREPARATIONS, NEC
	2111	CIGARETTES
	2121	CIGARS
	2131	CHEWING AND SMOKING TOBACCO
	2141	TOBACCO STEMMING AND REDRYING
	2841	SOAP AND OTHER DETERGENTS
	2842	POLISHES AND SANITATION GOODS
	2843	SURFACE ACTIVE AGENTS
	2844	TOILET PREPARATIONS
P7		PETROLEUM
	1311	CRUDE PETROLEUM AND NATURAL GAS
	1321	NATURAL GAS LIQUIDS
	1381	DRILLING OIL AND GAS WELLS
	1382	OIL AND GAS EXPLORATION SERVICES
	1389	OIL AND GAS FIELD SERVICES, NEC
	2911	PETROLEUM REFINING
	2951	ASPHALT PAVING MIXTURES AND BLOCKS
	2952	ASPHALT FELTS AND COATINGS
	2992	LUBRICATING OILS AND GREASES
	2999	PRODUCTS OF PETROLEUM AND COAL, NEC
	4612	CRUDE PETROLEUM PIPELINES
	4613	REFINED PETROLEUM PIPELINES
	4619	PIPELINES, NEC
	4922	NATURAL GAS TRANSMISSION
	5171	PETROLEUM BULK STATIONS AND TERMINALS
	5172	PETROLEUM PRODUCTS, NEC
	5541	GASOLINE SERVICE STATIONS
P8		CHEMICALS
	2812	ALKALIES AND CHLORINE
	2813	INDUSTRIAL GASES
	2816	INORGANIC PIGMENTS
	2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
	2821	PLASTICS MATERIALS AND RESINS
	2822	SYNTHETIC RUBBER
	2823	CELLULOSIC MANMADE FIBERS
	2824	ORGANIC FIBERS, NONCELLULOSIC
	2851	PAINTS AND ALLIED PRODUCTS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	2861	GUM AND WOOD CHEMICALS
	2865	CYCLIC CRUDES AND INTERMEDIATES
	2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
	2873	NITROGENOUS FERTILIZERS
	2874	PHOSPHATIC FERTILIZERS
	2875	FERTILIZERS, MIXING ONLY
	2879	AGRICULTURAL CHEMICALS, NEC
	2891	ADHESIVES AND SEALANTS
	2892	EXPLOSIVES
	2893	PRINTING INK
	2895	CARBON BLACK
	2899	CHEMICAL PREPARATIONS, NEC
P9		MINING
	1011	IRON ORES
	1021	COPPER ORES
	1031	LEAD AND ZINC ORES
	1041	GOLD ORES
	1044	SILVER ORES
	1061	FERROALLOY ORES, EXCEPT VANADIUM
	1081	METAL MINING SERVICES
	1094	URANIUM - RADIUM - VANADIUM ORES
	1099	METALLIC ORES, NEC
	1221	BITUMINOUS COAL AND LIGNITE - SURFACE
	1222	BITUMINOUS COAL - UNDERGROUND
	1231	ANTHRACITE MINING
	1241	COAL MINING SERVICES
	1411	DIMENSION STONE
	1422	CRUSHED AND BROKEN LIMESTONE
	1423	CRUSHED AND BROKEN GRANITE
	1429	CRUSHED AND BROKEN STONE, NEC
	1442	CONSTRUCTION SAND AND GRAVEL
	1446	INDUSTRIAL SAND
	1455	KAOLIN AND BALL CLAY
	1459	CLAY AND RELATED MATERIALS, NEC
	1474	POTASH, SODA, AND BORATE MINERALS
	1475	PHOSPHATE ROCK
	1479	CHEMICAL AND FERTILIZER MINING, NEC
	1481	NONMETALLIC MINERALS SERVICES
	1499	MISCELLANEOUS NONMETALLIC MINERALS
R1		ELEMENTARY AND SECONDARY SCHOOLS
	821A	ELEM/SEC SCHOOLS - PRIVATE AND PAROCHIAL
	8211	ELEMENTARY/SECONDARY SCHOOLS - PUBLIC
	942R	ELEMENTARY/SECONDARY SCHOOLS, STATE ENTERPRISE
	952R	ELEMENTARY/SECONDARY SCHOOLS, COUNTY ENTERPRISE
	962R	ELEMENTARY/SECONDARY SCHOOLS, CITY ENTERPRISE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
R2		VOCATIONAL SCHOOLS - NON PROFIT
	821C	POST HIGH/VOC SCHOOLS - NON PROFIT
	942V	VOCATIONAL SCHOOLS, STATE ENTERPRISE
	952V	VOCATIONAL SCHOOLS, COUNTY ENTERPRISE
	962V	VOCATIONAL SCHOOLS, CITY ENTERPRISE
R3		CORRES., BUS., VOC. SCHOOLS-PROFIT MAKING
	8244	BUSINESS & SECRETATIAL SCHOOLS, EXCL- DP
	8249	VOCATIONAL SCHOOLS, NEC - PROFIT MAKING
	8331	JOB TRAINING AND RELEATED SERVICES
R4		REGIONAL SCHOOL CENTERS
	821B	ELEM/SEC SCHOOLS - REGIONAL CENTERS
R5		EDUCATIONAL - OTHER
	731R	PURCHASING AGENCIES, ELEM/SEC/VOC SCHOOLS
	942A	STATE BD OF EDUCATION (K-12 ONLY)
S1		BROKERS/DEALERS
	6211	SECURITY BROKERS AND DEALERS
	6221	COMMODITY CONTRACTS BROKERS AND DEALERS
S2		EXCHANGES
	623A	COMMODITY EXCHANGES
	6231	SECURITY EXCHANGES
	6282	INVESTMENT ADVICE
	6289	SECURITY AND COMMODITY SERVICES, NEC
S3		INVESTMENTS
	6722	MANAGEMENT INVESTMENT COS., OPEN-END
	6726	INVESTMENT OFFICES, NEC
	6732	EDUCATIONAL, RELIGIOUS, ETC. TRUSTS
	6733	TRUSTS, NEC
	6792	OIL ROYALTY TRADERS
	6794	PATENT OWNERS AND LESSORS
	6799	INVESTING INSTITUTIONS, NEC
TA		AUTO RENTAL SERVICES
	7514	PASSENGER CAR RENTAL
	7515	PASSENGER CAR LEASING
TB		TRAVEL AGENCIES/TOUR OPERATORS
	4724	TRAVEL AGENCIES
	4725	TOUR OPERATORS
	4729	PASSENGER TRANSPORTATION ARRANGEMENT, NEC
TC		TRUCK/TRAILER RENTALS
	7513	TRUCK RENTAL AND LEASING
	7519	UTILITY TRAILER AND RV RENTAL

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
TD		WATER TRANSPORTATION, PASSENGER
	4481	DEEP SEA PASSENGER TRANSPORTATION, EXC. FERRY
	4482	FERRIES
	4489	WATER PASSENGER TRANSPORTATION, NEC
	4493	MARINAS
TE		AIRLINES, FREIGHT
	451A	AIR FREIGHT TRANSPORTATION
	4513	AIR COURIER SERVICES
T1		OTHER TRANSPORTATION SERVICES
	4221	FARM PRODUCT WAREHOUSING AND STORAGE
	4222	REFRIGERATED WAREHOUSING AND STORAGE
	4225	GENERAL WAREHOUSING AND STORAGE
	4226	SPECIAL WAREHOUSING AND STORAGE, NEC
	4231	TRUCKING TERMINAL FACILITIES
	4731	FREIGHT TRANSPORTATION ARRANGEMENT
	4741	RENTAL OF RAILROAD CARS
	4783	PACKING AND CRATING
	4785	INSPECTION AND FIXED FACILITIES
	4789	TRANSPORTATION SERVICES, NEC
	873T	COMMERCIAL PHYSICAL RESEARCH, TRANSPORTATION
T2		MOTOR FREIGHT
	4212	LOCAL TRUCKING, WITHOUT STORAGE
	4213	TRUCKING, EXCEPT LOCAL
	4214	LOCAL TRUCKING, WITH STORAGE
	4215	COURIER SERVICES, EXCEPT BY AIR
T3		RAILROADS, FREIGHT
	4011	RAILROADS, LINE-HAUL OPERATING, FREIGHT
	4013	SWITCHING AND TERMINAL SERVICES, FREIGHT
T4		LOCAL & HIGHWAY PASSENGER TRANSPORTATION
	4119	LOCAL PASSENGER TRANSPORTATION, NEC
	4121	TAXICABS
	4131	INTERCITY AND RURAL BUS TRANSPORTATION
	4141	LOCAL BUS CHARTER SERVICE
	4142	BUS CHARTER SERVICE, EXCEPT LOCAL
	4151	SCHOOL BUSES
	4173	BUS TERMINAL AND SERVICE FACILITIES
T5		WATER TRANSPORTATION, FREIGHT
	4412	DEEP SEA FOREIGN TRANSPORTATION OF FREIGHT
	4424	DEEP SEA DOMESTIC TRANSPORTATION OF FREIGHT
	4432	FREIGHT TRANSPORTATION ON THE GREAT LAKES
	4449	WATER TRANSPORTATION OF FREIGHT, NEC
	4491	MARINE CARGO HANDLING
	4492	TOWING AND TUGBOAT SERVICE

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	4499	WATER TRANSPORTATION SERVICES, NEC
T6		TRANSIT & AUTO PARKING
	4111	LOCAL AND SUBURBAN TRANSIT
	7521	AUTOMOBILE PARKING
T7		AIRLINES, PASSENGER
	4512	PASSENGER AIR TRANSPORTATION, SCHEDULED
	4522	PASSENGER AIR TRANSPORTATION, NONSCHEDULED
	4581	AIRPORTS, FLYING FIELDS, & SVCS (EXC. MUNICIPAL)
T8		RAILROADS, PASSENGER
	401A	RAILROADS, LINE-HAUL OPERATING, PASSENGER
	401B	SWITCHING AND TERMINAL SERVICES, PASSENGER
U1		UTILITIES, GAS
	4923	GAS TRANSMISSION AND DISTRIBUTION
	4924	NATURAL GAS DISTRIBUTION
	4925	GAS PRODUCTION AND/OR DISTRIBUTION
	4932	GAS AND OTHER SERVICES COMBINED
U2		UTILITIES, ELECTRIC
	4911	ELECTRIC COMPANIES AND SYSTEMS
	4931	ELECTRIC AND OTHER SERVICES COMBINED
U3		UTILITIES, COMBINATION
	4939	COMBINATION UTILITIES, NEC
U4		OTHER UTILITIES
	4941	WATER SUPPLY
	4961	STEAM SUPPLY
	4971	IRRIGATION SYSTEMS
	873U	COMMERCIAL PHYSICAL RESEARCH, UTILITIES
U5		UTILITIES, GOVERNMENT
	491B	ELECTRIC COMPANIES AND SYSTEMS
	492C	GAS TRANSMISSION AND DISTRIBUTION
	492D	NATURAL GAS DISTRIBUTION
	492E	GAS PRODUCTION AND/OR DISTRIBUTION
	493A	ELECTRIC AND OTHER SERVICES COMBINED
	493B	GAS AND OTHER SERVICES COMBINED
	493G	COMBINATION COMPANIES & SYSTEMS, NEC
	494A	WATER SUPPLY
	495B	SEWERAGE SYSTEMS
	495C	REFUSE SYSTEMS
	495G	SANITARY SERVICES, NEC
U6		UTILITIES, WASTE
	4952	SEWERAGE SYSTEMS

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	4953	REFUSE SYSTEMS
	4959	SANITARY SERVICES, NEC
U7		RURAL ELECTRIC COOP.
	491A	RURAL ELECTRIC ASSOCIATIONS (CO-OPS)
W1		DP LEASING COMPANIES
	7377	COMPUTER RENTAL AND LEASING
W2		DP EQUIPMENT BROKERS/DEALERS
	737K	BROKERS
W3		DP MAINTENANCE COMPANIES
	7378	COMPUTER MAINTENANCE AND REPAIR
W4		CUSTOMER SPECULATIVE - SPLIT ENTERPRISE
	737S	SPECULATIVE CUSTOMERS
X2		DOMESTIC ORDERS - OVERSEAS DESTINATION
	9997	DOMESTIC ORDERS-OVERSEAS DESTINATION
YA		FOREIGN AFFAIRS/SPECIAL OPS
	9186	CMU SPECIAL
	9199	CIA
	9201	STATE DEPT.
	9234	AID/OTHER
YB		NASA
	9020	NASA SPACE SCIENCE
	9021	NASA RESEARCH
	9022	NASA MANNED SPACE
	9027	NASA GODDARD (WASH. D.C. ONLY)
	9056	NASA SPACE STATION
	9142	NASA HQ
YC		ENERGY/TVA/COMMERCE
	9007	NRC
	9015	COMMERCE
	9016	NOAA
	9018	EPA
	9023	ERDA/CONTR
	9026	TVA
	9028	ENERGY INFO. ADMIN.
	9031	OPM
	9032	INDP. AGY.
	9033	EDUCATION
	9053	CENSUS/PAT/NBS
	9244	DOE HQ-AD

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
YD		EXECUTIVE/LEGISLATIVE
	9210	EXEC GOVERNMENT
	9211	GENERAL ACCOUNTING OFFICE
	9213	LIBRARY CONGRESS
	9214	HOUSE OF REPRESENTATIVES
	9215	US SENATE
	9216	INTERNATIONAL
	9219	GOVERNMENT PRINTING OFFICE
YE		SBA/FTC
	9012	SBA/FTC
	9057	FCC/ICC
YF		RESTRICTED
	9042	RESTRICTED AFS
	9043	RESTRICTED SAM
	9065	RESTRICTED 1
	9240	RESTRICTED SPACE
YG		ARMY/AIR FORCE EXCHANGES (COMMISSIONABLE)
	9046	AAFES DOMESTIC
	9047	AAFES OVERSEAS
YH		INTERNATIONAL (COMMISSIONABLE)
	9217	FOREIGN GOVERNMENT EMBASSIES AND CONSULATES
YI		REGULATORY
	9003	TREASURY DEPT
	9004	IRS
	9006	SEC
	9009	NATIONAL SCIENCE FOUNDATION
	9010	FDIC
	9070	PENSIONS
	9231	BUREAU CUSTOMS
	9245	FED RESERVE BD
YJ		LABOR/GSA/SMITHSONIAN
	9002	VA ADMIN.
	9005	GSA
	9029	SMITHSONIAN / NAS / EEOC
	9040	LABOR
	9230	VA HOSPITALS
YK		NFM/FSD - COMPLEX SYS. ORG.
	901F	NFM/FSD - COMPLEX SYS. ORG.
	902F	NFM/FSD - COMPLEX SYS. ORG.
	903F	NFM/FSD - COMPLEX SYS. ORG.
	904F	NFM/FSD - COMPLEX SYS. ORG.
	905F	NFM/FSD - COMPLEX SYS. ORG.

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
Y1		ARMY
	9044	ARMY - RFP 28W ONLY
	9048	ARMY PENTAGON/LOCAL
	9055	ARMY - FORSCOM
	9060	ARMY AMC/COMMODITY CMD
	9061	ARMY AMC/LABCOM
	9062	ARMY AMC/DEPOTS
	9063	ARMY PANAMA
	9064	ARMY AMC/TECOM
	9066	ARMY - VIABLE 28W ONLY
	9067	ARMY PERSONNEL
	9068	ARMY FINANCE
	9069	ARMY MEDICAL
	9071	ARMY RFP 28W ONLY
	9072	EUROPE 5TH SIGNAL
	9073	PACIFIC 5TH SIGNAL
	9074	ARMY PACIFIC
	9075	ARMY EUROPE
	9077	ARMY MISC. COMMANDS
	9078	ARMY - TRADOC
	9079	ARMY MTMC
	9081	ARMY AMC/CORPS OF ENGINEERS
	9082	ARMY ISEC FT. BELVOIR
	9083	ARMY NATIONAL GUARD
	9084	ARMY RESERVE
	9221	BELL LABS
	9222	ARMY TAGO
	9223	ARMY AUDIT
	9224	ARMY JAG
	9225	ARMY TROOP SUPPORT
	9226	ARMY WEST POINT
	9227	ARMY HQ FT. HAUCHUCA
	9228	ARMY ISMA FT. MONMOUTH
	9229	ARMY 7TH SIGNAL FT. RICHIE
Y2		NAVY
	9049	ICP1
	9050	NAV TELECOMMU CMD
	9051	NAVY - RESTRICTED
	9076	SPAR
	9086	ICP2
	9090	NAV EDUC/TRAINING CMD
	9091	NAV PERSONNEL/FINANCE
	9092	NAV ELECTRONICS CMD
	9093	NAV LABS/R & D CTRS
	9094	NAV CONTRACTORS
	9095	NAV MEDICAL CMD
	9097	NAV CNO/OPERATING FORCES
	9098	NAV SEA SYS CMD

TABLE I - SIC CODES BY INDUSTRY CLASS

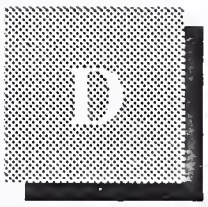
IN CL	SIC CODE	DESCRIPTION
	9100	NAV FACILITY CMD
	9101	NAV DATA AUTOMATION CMD
	9102	NAV MILITARY SEALIFT CMD
	9103	NAV OCEANOGRAPHY CMD
	9104	NAV RESERVE CMD
	9105	NAV MATERIAL HQ
	9107	NAV SUPPLY SYS CMD
	9108	NAV AIR SYS CMD
	9111	NAV MAT. FIELD ACCOUNT
	9113	MARINE CORPS
Y3		AIR FORCE/JOINT DEFENSE
	9045	AF LESSER COMDS AND OVERSEAS
	9052	AF NON AP FND
	9099	SWPS PROJECT
	9114	AF CTRS-RES-GRD
	9116	AF CONTRACTOR - MIL SPACE
	9117	AF LOG CMD
	9118	AF EUR-PAC-ALAS
	9119	AF SYS. CMD.
	9120	AF TRAINING CMD
	9122	AF MISC.
	9123	AF COMM. CMD
	9124	AF INSP. & SAFETY
	9128	AF CONTRACTORS
	9129	AF AEROSPACE CORP
	9131	AF SYST. DEVEL. CORP
	9133	AF FSD SPACE
	9134	AF SAMSO GENERAL
	9136	AF SCF
	9137	AF SAMTEC
	9138	AF SAMSO WESTOVER
	9141	AF TEST RANGE
	9143	DCA-JT. DATA SYS. SUPT. AGENCY
	9144	DCA WORLD WIDE ON-LINE SYS.
	9145	DCA-DEF. COMM. OPER. SUPT. SYS
	9146	JCS - WISCUC
	9147	DOD-DEPENDENT SCHOOLS
	9148	DLA-DEPOTS
	9149	DLA-SUPPLY CTRS
	9150	DOD-DEF. COMM. ENGR. CTR
	9151	DLA-SVCS.CTRS
	9152	DLA-DCASRS
	9153	DOD-DEF. NUCLEAR AGENCY
	9154	DLA-OTHER
	9155	DOD-SECURITY AUDIT AGENCY
	9156	DOD-ADVNCD RSCH. PROG. AGENCY
	9157	DOD-DEF. AUDIT AGENCY
	9158	DOD-DEF. CONTRACT AUDIT AGENCY

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9159	DOD COMMAND & CONTROL
	9160	DOD-OFF. SECR. DEF. FLD. AGENCY
	9161	DOD-UNIFORM SERV. UNIV. HOSP. SYS
	9165	JCS JOINT CMDS
	9233	AF AESC
	9238	AF COMMISSARY
	9239	AF MIL AIRL CMD
	9241	AIR FORCE PENTAGON (WASH. D.C. ONLY)
	9242	AF TAC
	9246	AF SAC
	9247	AF WEAPONS CONTR.
Y4		HEALTH
	9011	H&HS HRSA/ADAMHA
	9034	H&HS/SSA
	9035	H&HS/NIH
	9036	H&HS/ADMIN
	9037	H&HS/NAT. LIB. MED.
	9038	H&HS PCC INDIAN HEALTH/FDA
	9039	H&HS NIH/RJE
	9058	H&HS OASH
	9059	TERM. ACQUISITION PROJECT
Y5		FAA/TRANSPORTATION
	9000	FAA-LOCAL (WASH. D.C. ONLY)
	9001	FAA-NATIONAL
	9008	FAA - NATIONAL ADMIN.
	9014	DOT/HWY ADM/MARTME/ST. LAW
	9017	DOT
	9054	FAA - DRA
	9085	FAA - LOCAL ADMIN. (WASH. D.C. ONLY)
Y6		SECURITY/DEF INTELLIGENCE
	9080	DEF. INVESTIGATIVE UNITS
	9185	SECURITY-1
	9187	SECURITY-2
	9189	INTEL - ARMY
	9191	INTEL - NAVY
	9193	INTEL - AF
	9195	DIA
	9198	INTEL - OTHER
Y7		INTERIOR/AGRICULTURE
	9013	FARM CREDIT ADMIN.
	9019	AGRICULTURE
	9024	INTERIOR DEPT
	9025	GEOLOGICAL SURVEY
	9030	FED. CHART. INDIAN TRIBES
	9041	HOUSE URBAN DEV.

TABLE I - SIC CODES BY INDUSTRY CLASS

IN CL	SIC CODE	DESCRIPTION
	9243	AG. FT COLLINS
Y8		USPS
	9106	USPS FLD/OP SPT
	9202	USPS - NORTHEAST
	9203	USPS - EAST
	9204	USPS - SOUTH
	9205	USPS - CENTRAL
	9206	USPS - WEST
	9207	USPS - WASH
	9248	USPS/SFC-NORTHEAST
	9249	USPS/SFC-EAST
	9250	USPS/SFC-SOUTH
	9251	USPS/SFC-CENTRAL
	9252	USPS/SFC-WEST
Y9		JUSTICE/FBI
	9208	JUDICIARY
	9209	DEPT. OF JUSTICE
	9235	FBI
	9236	DRUG ENFORCEMENT ADM
	9237	DOJ-PRISONS
Z1		O.E.M. SALES - FOR SUBSEQUENT RESALE
	357X	O.E.M. SALES FOR SUBSEQUENT RESALE
	357Y	O.E.M. INSTALLATION FOR PRODUCT DEVELOPMENT/TEST
	357Z	O.E.M. DIVISION RESTRICTED ACCOUNT
Z3		SALES TO PC RETAILERS
	893R	SALES TO PC RETAILERS



IS Revenues by IBM Industry

Appendix D

	Manuf. M5	Auto M2	Aero MA	Elect. M3	Constr. M1	Process P1/2/3/4	Consumer P6	Chem./ Pharm. P8/5	Petro P7	R/G/M P3	Comm. A	Comp. Servs. B	Consult. C	Health H	Higher Ed. E
ADOBE	20847	3472	4940	9633	1132	1640	458	386	1565	667	3136	1374	727	13816	8877
ADP	100497	16886	23815	46438	2779	22120	6210	5939	20982	10259	12520	25300	17366	62991	11398
AGS/NYNEX	36326	6142	8608	16786	11067	12013	5906	5190	6947	5510	42000	809	2260	16627	19225
ALDUS	6246	1065	1480	2886	1164	2935	892	803	1724	1387	3920	897	588	5543	2300
AMERICAN MANAGEMENT SYS	7596	1339	2800	3510	326	7724	2263	2167	3923	3743	22640	1053	427	9499	28493
AMERICAN SOFTWARE	15614	2702	3700	7215		11021	3192	3080	6446	5320				7000	
ANALYSTS INT. CORP.	11000	11000		29000		16000	2000	4000	5000	2000	8000	1000	1000		1000
ANDERSEN CONSULTING	114156	16013	27838	46584	4703	83638	14160	19973	48390	14489	68160	3461	2805	74150	17866
ASK COMPUTER SYSTEMS	22999	3950	5450	10628	1855	13375	3921	3711	9412	6411	5120	6767	4655	8923	4735
AUTO DESK	9710	1623	2301	4487	1094	1329	404	336	1343	580	2520	1068	575	11871	6477
BMC SOFTWARE	7942	1329	1882	3670	922	1198	364	306	1150	528	1760	872	470	9630	5327
BOEING	2055	182	250	488	305	736	223	204	471	1352	4680	1403	735	58	5645
BOOLE & BABBAGE	4250	711	1007	1964	474	638	193	163	588	281	992	427	231	4917	2552
BORLAND	21121	3532	5005	9760	1863	3016	893	770	2888	1330	4808	1913	1127	26303	8673
CADENCE DESIGN SYSTEMS	74694	12390	17700	34515		885			3300						
COGNOS INC	2110	358	500	975	1140	829	278	220	594	380	2400	3162	2156	3630	2194
COMPUTER ASSOC. INT.	54278	9171	12862	25081	4831	17045	5035	4620	13437	7980	27032	5444	2891	51793	36973
COMPUTER DATA SYSTEMS	3507	252	2357	2696	193	252	77	65	126	112	7288	373	88	324	7211
COMPUTER HORIZONS	3000		4000	16000		7000	4000	3000	3000	3000	18000			1000	
COMPUTER LANGUAGE RES	10006	1673	2371	4623	1087	1402	424	355	1321	614	2200	1045	559	11625	6542
COMPUTER SCIENCES	77206	11969	29400	31980	11920	51406	14556	13442	27289	23218	52400	7287	4116	92180	49329
COMPUTER TASK GROUP	50438	13202	8000	25155	1348	17328	6972	6770	12134	8070	28800	3101	2368	4215	7977
COMSHARE	10064	889	1200	2340	984	6811	4441	1342	2386	2318	2800	1074	1027	1896	2237
CYCARE SYSTEMS														69060	
D&B SOFTWARE	44310	7533	10500	20475	2340	18305	5341	5033	9774	8693	10160	645	392	18980	3939
EDS	77950	22710	38500	72875	11350	94365	27960	26400	61293	35600	45000	5841	3038	204965	112457
FISERV															
GOAL SYSTEMS	6402	1074	1517	2958	876	1256	385	328	1043	566	2296	669	379	6920	3514
HBO														154000	
INFORMIX	7258	1213	1720	3354	540	954	278	242	948	418	1680	806	422	7734	5329
INTERLEAF INC	4937	840	1170	2282	1055	2143	659	583	1246	1007	2560	651	421	4900	1914

Appendix D

	Manuf. M5	Auto M2	Aero MA	Elect. M3	Constr. M1	Process P1/2/3/4	Consumer P6	Chem./ Pharm. P8/5	Petro P7	R/G/M P3	Comm. A	Comp. Servs. B	Consult. C	Health H	Higher Ed. E
INTERMETRICS	5349	4338	7850	1027	286	392	984	935	1635	1615	640	1141	98	1240	227
INTERSOLV	4558	771	1080	2106	279	1514	442	413	936	713	680	303	211	377	359
KEANE INC.	9000	11000		7000		7000	2000	5000		2000	9000		1000	21000	
KNOWLEDGEWARE	7913	1329	1875	3656	552	1658	484	440	1444	760	3480	804	446	10253	4781
LEGENT	10571	1768	2505	4885	910	1507	445	385	1458	665	2440	1163	618	11632	7429
LOCKHEED	16555	2928	4160	8112	404	2729	465	429	1287	741	1200	670	353	18104	14999
LOGICON	2000			3000											
LOTUS	34477	5761	8170	15932	6562	4640	1531	1144	4560	1976	8720	3587	2097	41411	15918
MARTIN MARIETTA	5170	863	8225	2389		545	143	138	509	238		45		8400	8995
MENTOR GRAPHICS CORP.	80180	13300	19000	37050		950									
MICROSOFT	108538	18122	25720	50154	9872	12959	3854	3232	13138	5582	22960	10398	5684	121120	62866
NATIONAL DATA									2220		6400			23075	1470
NATIONAL EDUCATION CORP.	2000	800	700	3000	200	18000	2700	2500	3000	1300	8000	100	400	10000	500
NOVELL	38149	6381	9040	17628	3911	5680	1705	1452	5386	2508	9120	4091	2264	48997	24179
NYNEX -- SEE ABOVE															
ON-LINE SOFTWARE INT.	5655	963	1340	2613	1063	2499	762	682	1472	1178	3280	770	500	5862	2222
ORACLE	34393	5742	8150	15893	2433	4040	1169	2012	4043	1748	11600	3803	2205	39243	19171
PANSOPHIC	13968	2332	3310	6455	786	1621	462	407	1622	703	1920	927	490	10055	5951
POLICY MANAGEMENT SYS															
SHARED MEDICAL														417000	
SHL SYSTEMHOUSE	2188	332	400	780	90	12051	1482	1430	3019	2470	24400	1359	882	8385	7563
SOFTWARE PUB.	7934	1325	1880	3666	600	963	281	242	1007	418	1920	886	466	8444	5786
STERLING SOFTWARE	8917	1488	2113	4120	1466	1049	340	255	1058	1041	1920	1359	755	11401	7404
SUNGUARD	8946	1488	2120	4134	3	493	114	110	206	190	896	39	27	4	5
SYBASE INC	10170	1721	2410	4700	1336	3452	1039	935	1862	1615	7200	734	470	3382	2301
SYMANTEC CORP	9073	1545	2150	4193	1636	4067	1236	1111	2380	1919	5760	1096	706	9928	3713
SYSTEM CENTER	6246	1047	1480	2886	692	1167	351	305	1030	526	1576	720	377	7865	4794
SYSTEM SOFTWARE ASSOC.INC.	25366	6762	7300	13013		5296	1482	1430	2681	2470					
SYSTEMATICS															
VALID LOGIC SYSTEMS INC.	30384	5040	7200	14040	4600	510	250								
GRAND TOTAL	1294218	250362	349051	670786	103027	492149	135204	134413	304672	178207	515984	110434	70873	1721722	562814

Appendix D

	Media K	Schools R	State/ Loc. Gov G	Transp. T	Util. U	Whl.Dist J	Ret.Dist D	Finance F	Insur. N	Sec'ties S	Fed. Gov Y	TOTAL
INTERMETRICS	2599	172	915	2038	682	623	2220	2673	2509	545	16468	59000
INTERSOLV	1819	277	1403	1018	132	4250	5915	8582	1869	1765	2230	44000
KEANE INC.		1000	2000		2000		1000	4000	17000	1000		102000
KNOWLEDGEWARE	3829	1570	2379	2834	2644	7494	4826	22308	6841	4602	5800	105000
LEGENT	4602	2184	1373	3530	2792	10019	5979	27340	10692	5629	8480	131000
LOCKHEED	5587	8859	46970	13144	1707	5811	6609	15792	6333	3252	53800	241000
LOGICON											212000	217000
LOTUS	15376	4931	4026	12008	8628	33324	21213	91516	35693	18840	28960	431000
MARTIN MARIETTA	1348	5900	34160			9710	1225				483000	571000
MENTOR GRAPHICS CORP.	20900						18620					190000
MICROSOFT	45506	19576	21350	37379	24307	96355	67062	252209	116882	51935	94240	1301000
NATIONAL DATA	2340	1050	6405			3774	67266	67814		14186	10000	206000
NATIONAL EDUCATION CORP.	12000	1000	3000	3000	2000	3000	2000	16000	16000	7000	1000	119200
NOVELL	16776	7768	10370	14490	9651	36721	23931	105070	48968	21651	31115	507000
NYNEX -- SEE ABOVE												
ON-LINE SOFTWARE INT.	3286	1042	3599	3158	1285	4569	3528	11842	5146	2405	10280	81000
ORACLE	16274	6565	11407	7813	6760	28754	20352	91673	37203	18857	100700	502000
PANSOPHIC	5108	1710	732	3038	2144	17805	6681	28458	6495	5882	6940	136000
POLICY MANAGEMENT SYS									378000			378000
SHARED MEDICAL												417000
SHL SYSTEMHOUSE	4040	6298	36350	108	18	7539	14983	612	81		48140	185000
SOFTWARE PUB.	3484	1660	702	2836	1965	7388	4886	20998	6743	4325	5200	96000
STERLING SOFTWARE	4488	2179	1159	3348	2098	10933	22206	31611	8769	6503	66020	204000
SUNGUARD	2614	6		559	1	521	2561	190643	14303	39877	140	270000
SYBASE INC	5381	1026	3294	2281	1370	4225	4168	21167	2343	4360	19060	112000
SYMANTEC CORP	5213	1778	6588	4692	1969	6986	5945	18187	8165	3702	18260	132000
SYSTEM CENTER	2784	1401	842	2309	1716	6291	4260	16636	6525	3425	5750	83000
SYSTEM SOFTWARE ASSOC.INC.						14200						80000
SYSTEMATICS								377000				377000
VALID LOGIC SYSTEMS INC.	7920						7056					77000
GRAND TOTAL	552255	739311	871173	282989	294834	988416	960120	3348308	1765990	554144	3444812	20196266

Appendix D

	Media K	Schools R	State/ Loc. Gov G	Transp. T	Util. U	Whl.Dist J	Ret.Dist D	Finance F	Insur. N	Sec'ties S	Fed. Gov Y	TOTAL
ADOBE	7680	2595	1525	4464	3075	10751	9647	29689	11697	6105	8102	168000
ADP	63950	6213	1312	19189	17414	263540	111364	566202	111095	115923	39298	1701000
AGS/NYNEX	20677	8683	34923	32	6125	8061	27650	60617	16074	6643	15100	400000
ALDUS	3775	1107	3874	3486	1542	4964	4051	12151	4954	2457	10810	87000
AMERICAN MANAGEMENT SYS	6669	10215	26755	7559	1788	1012	5021	43506	992	2783	70200	274000
AMERICAN SOFTWARE	4100			3176	6800	7921	6913	4962		1038	800	101000
ANALYSTS INT. CORP.	4000	1000	1000				4000	7000	8000	2000		118000
ANDERSEN CONSULTING	47113	9623	69969	25281	58270	51946	141480	158734	121203	32296	72700	1345000
ASK COMPUTER SYSTEMS	16376	3045	9394	12242	16755	28593	12888	16326	2833	2739	11900	245000
AUTO DESK	4321	1884	946	3286	2545	9561	6329	27277	10303	5623	7210	125000
BHC SOFTWARE	3462	1578	1049	2718	2058	7683	5472	20836	8063	4290	6440	101000
BOEING	2874	7795	32313	376	695	643	600	2495	8888	415	244120	320000
BOOLE & BABBAGE	1822	747	412	1461	1033	3836	2644	10754	4176	2216	3511	52000
BORLAND	8993	2913	4392	7324	4970	19860	14153	58837	22604	12145	15810	265000
CADENCE DESIGN SYSTEMS	19470				18700		17346					199000
COGNOS INC	5340	1084	1220	1058	894	11145	1439	4804	2198	692	200	51000
COMPUTER ASSOC. INT.	26797	11713	15250	14741	21862	56358	39442	131862	67066	27164	60274	751000
COMPUTER DATA SYSTEMS	3387	3713	19505	154	78	555	462	1401	258	280	76285	131000
COMPUTER HORIZONS	5000	2000	4000	4000	500	9000	2000	5000	500	1000		95000
COMPUTER LANGUAGE RES	4285	1911	1074	3268	2306	9130	6374	18747	9421	3841	7796	114000
COMPUTER SCIENCES	17475	19724	96170	10032	19209	50891	35786	89278	107378	18079	795281	1757000
COMPUTER TASK GROUP	12534	7782	9795	72	2067	10964	2758	7029	13554	7567		270000
COMSHARE	3256	2021	1220	1665	863	735	238	3764		3030	1400	60000
CYCARE SYSTEMS								4967		1039		75066
D&B SOFTWARE	14980	2000	7808	10958	5661	12037	23022	50223	8536	10449	22908	335000
EDS	41910	48482	323300	19634	21312	72778	142293	266748	470279	55360	727600	3030000
FISERV								278000				278000
GOAL SYSTEMS	3015	1113	1269	1928	1623	5537	4910	16183	7335	3330	4574	81000
HBO												154000
INFORMIX	3158	1532	689	2553	1794	6883	4184	17743	7789	3650	5130	88000
INTERLEAF INC	276	885	2989	2751	1029	3741	3162	11043	4239	2249	9780	71000